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1984-85 CATALOG



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CLARION UNIVERSITY

ACADEMIC CALENDAR 1983-84

Summer Sessions — 1983

First five-week session	June 13-July 15
Second five-week session	July 18-August 19

First Semester

Registration for day and evening classes	Monday, August 29
Classes begin 8:00 A.M.	Tuesday, August 30
Labor Day holiday	Monday, September 5
Thanksgiving holiday recess begins 5:50 P.M.	Tuesday, November 22
Thanksgiving recess ends 8:00 A.M.	Monday, November 28
Classes end 5:50 P.M.	Friday, December 16
Final examinations begin	Saturday, December 17
Winter Commencement — 2:00 P.M.	Sunday, December 18
Final examinations end 10:00 P.M.	Thursday, December 22
Semester ends 10:00 P.M.	Thursday, December 22
Semester grades due from faculty by	Friday, December 30

Second Semester

Registration for day and evening classes	Monday, January 9
Classes begin 8:00 A.M.	Tuesday, January 10
Martin Luther King's Birthday	
No day or evening classes	Monday, January 16
Academic Festival — No day classes	
Evening classes will be held	Wednesday, February 22
Spring vacation begins 5:50 P.M.	Friday, March 9
Spring vacation ends 8:00 A.M.	Monday, March 19
Easter recess begins 8:30 P.M.	Thursday, April 19
Easter recess ends 8:00 A.M.	Tuesday, April 24
Spring Festival of the Arts	April 27, 28, 29
Classes end 10:00 P.M.	Friday, May 4
Final examinations begin 8:00 A.M.	Saturday, May 5
Final examinations end 5:00 P.M.	Friday, May 11
Semester ends 5:00 P.M.	Friday, May 11
Commencement — 2:00 P.M.	Sunday, May 13
Semester grades due from faculty by	Friday, May 18

CLARION UNIVERSITY

ACADEMIC CALENDAR — 1984-85

Summer Sessions — 1984

First Five-Week Session.....	June 11-July 14
Second Five-Week Session.....	July 16-August 17

First Semester

Registration for day and evening classes.....	Monday, August 27
Classes begin 8:00 A.M.....	Tuesday, August 28
Labor Day holiday	Monday, September 3
Thanksgiving holiday recess begins 10:00 P.M. . .	Tuesday, November 20
Thanksgiving recess ends 8:00 A.M.	Monday, November 26
Classes end 10:00 P.M.	Friday, December 14
Final examinations begin	Saturday, December 15
Final examinations end 10:00 P.M.....	Friday, December 21
Semester ends 10:00 P.M.	Friday, December 21
Winter Commencement — 2:00 P.M.	Saturday, December 22
Semester grades due from faculty by noon	Friday, December 28

Second Semester

Registration for day and evening classes.....	Monday, January 7
Classes begin 8:00 A.M.....	Tuesday, January 8
Martin Luther King's Birthday	
No day or evening classes.....	Tuesday, January 15
Academic Festival — No day classes	
Evening classes will be held	Wednesday, February 20
Spring vacation begins 10:00 P.M.	Friday, March 8
Spring vacation ends 8:00 A.M.....	Monday, March 18
Easter recess begins 10:00 P.M.	Thursday, April 4
Easter recess ends 8:00 A.M.	Tuesday, April 9
Classes end 10:00 P.M.	Thursday, May 2
Reading Day	Friday, May 3
Final examinations begin	Saturday, May 4
Final examinations end 5:00 P.M.	Saturday, May 11
Semester ends 5:00 P.M.	Saturday, May 11
Commencement — 2:00 P.M.....	Sunday, May 12
Semester grades due from faculty	Wednesday, May 15

THE UNIVERSITY

MISSION

Clarion University of Pennsylvania is committed to the pursuit of excellence in all aspects of higher education within its mission. The University strives to provide an environment which challenges students to develop their talents, extends their intellectual abilities and interests, stimulates them to expand their creative abilities, and provides the impetus to a life-long respect and enthusiasm for learning. The University is dedicated to helping students see in themselves what they may become and assisting them in becoming all that they can be. Students are provided the opportunity to develop the knowledge, skills, and attitudes required for entrance into a variety of careers and for participation in a free society as enlightened citizens, capable of making wise and responsible choices.

Clarion University is committed to serve the citizens of Pennsylvania and the nation through the communication of knowledge, the application of knowledge, and the creation of new knowledge. Clarion University strives to provide students with the finest undergraduate education available in Pennsylvania, and to provide graduate programs which complement that primary effort.

MAIN CAMPUS

Now more than a decade into its second century, Clarion University has successively been Carrier Seminary, a state normal school, a state teachers' college, since 1960 a state college, and beginning July 1, 1983 a University. Each phase of this development has marked a stage in the continuing effort of the institution to respond to the educational needs and aspirations of increasing numbers of students. The University is proud to be a public institution of higher education belonging to the people whom it serves, for public education is a manifestation of the self-evident truth that a factor of utmost importance in the preservation and improvement of any society is the education of its people and that in a free society placing this responsibility upon public institutions of learning is compatible and consistent with the philosophical concepts of democracy.

Today, Clarion University is a multi-purpose institution with an enrollment of approximately 5200 students offering associate degrees in three areas; more than sixty baccalaureate programs leading to the Bachelor

of Arts, Bachelor of Fine Arts, and Bachelor of Science; and twelve graduate programs leading to the Master of Arts, Master of Business Administration, Master of Education, Master of Science, and Master of Science in Library Science. It is the goal of the University to offer high quality educational programs staffed by excellent faculty within a learning environment in which the rights of all people are respected.

The main campus of the University contains ninety-nine acres and forty-three buildings, the majority of which were constructed within the past twenty years. Beyond the main campus, situated at the west end of the town of Clarion, is a 27-acre athletic complex with football, baseball and practice fields and Memorial Stadium, seating 5,000 spectators. The university is within the Borough of Clarion some two miles north of Interstate 80 at Exits 9 and 10 and is approximately two and one half hours driving time from the urban centers of Pittsburgh, Erie, and Youngstown. High on the Allegheny Plateau overlooking the Clarion River, the rural setting is in the midst of one of Pennsylvania's most scenic resort areas. The rolling wooded countryside, interspersed with small farms, affords some of the most enjoyable outdoor activities to be found anywhere in northwestern Pennsylvania, and the Clarion River provides an excellent setting for summer boating, swimming, and aquatic sports. Clarion also administers the Ivan McKeever Environmental Education Center in Mercer County, with modern building facilities in the midst of a two hundred acre wooded area near Sandy Lake, Pennsylvania.

Among facilities supporting programs at Clarion University are Carlson Library housed in a modern library building with a large and continually growing collection, the George R. Lewis Computer Center operating both IBM and Sperry-Univac computers and associated equipment, modern science laboratories having excellent instrumentation, well equipped support areas for special education and speech pathology and audiology, a modern business administration building, technologically equipped classrooms for library science, radio and television studios and experimental audio-visual facilities in the School of Communication, and a writing center, tutorial services, and a counseling center to assist students who can benefit from these services.

VENANGO CAMPUS

Clarion University operates the Venango Campus in Oil City, Pennsylvania, as an integral part of the institution. The Venango Campus, situated on a sixty-four acre hillside tract, has modern classroom, library, and student center buildings, and offers programs for both part time and full time students.

FACILITIES

ALUMNI HOUSE on Wood Street contains offices for the Alumni Association, and Public Affairs.

BALLENTINE RESIDENCE HALL, located on Wood Street, houses 116 men.

BECHT RESIDENCE HALL, also on Wood Street, houses 160 women plus faculty office space.

BECKER HALL, at Greenville Avenue and Thorn Street, houses the College of Communication, offices for the College of Education and Human Services, and the Computer Information Science Department.

CAMPBELL RESIDENCE HALL houses 450 students. It is located at the corner of Payne and Wilson Avenue.

CARLSON LIBRARY is on the central campus just off Wood Street.

CARRIER ADMINISTRATION BUILDING at Main Street and Ninth Avenue, houses offices for the President and his staff, the Provost and Academic Vice President and his staff, the Vice President and Dean of Administration and their staffs; Records, Business Office, Personnel, Affirmative Action, Student Accounts, Graduate and Continuing Education offices.

CHANDLER DINING HALL is north of Wood Street behind Ballentine Hall.

CHAPEL THEATER is located on Wood Street and Eighth Avenue.

DAVIS HALL on Greenville Avenue has offices for academic support services, and houses the Duplicating Center and Print Shop.

EGBERT HALL is on the central campus behind Carlson Library. It has administrative offices for the Vice President for Student Affairs and his staff, the Counseling Center, the Office of Financial Aid, the office of Educational Opportunities for Student Development, and the Housing Office.

FOREST MANOR, a privately owned college-supervised residence hall located on Grand Avenue, houses 570 men and women students. A dining hall is included in the building.

FOUNDERS HALL is situated at the corner of Wood and Ninth and houses classroom, History, APPS departmental offices, and College of Arts and Sciences Office.

GIVEN RESIDENCE HALL, situated on the hill behind Chandler Dining Hall, houses 250 students.

HARVEY HALL is on center campus between Peirce Science and Chandler Dining Hall. It contains the John Nanovsky Multi-purpose Area for meetings and dances, student activity offices, and a vending machine snack area.

HASKELL HOUSE on Wood Street has offices for Special Services and the Upward Bound Program.

KEELING HEALTH SERVICES CENTER off Wilson Avenue, behind Given Hall, has modern clinical and infirmary facilities located on the first floor. The SPA Diagnostic Center is located on the ground floor.

MARWICK-BOYD FINE ARTS CENTER, which stands at the south corner of Payne Street and Greenville Avenue, provides a 1600 seat auditorium, little theater, and Sandford Art Gallery, classrooms, studios, laboratories, offices and exhibit areas for Art, Music, and Speech.

McENTIRE MAINTENANCE BUILDING on Wilson Avenue, south of Payne Street, is the center for physical plant maintenance, public safety, the motor pool and maintenance shops.

McKEEVER ENVIRONMENTAL LEARNING CENTER at Sandy Lake, Pennsylvania, is a facility consisting of eight buildings located on a 200-acre tract ideal for environmental and nature activities.

MUSIC HALL, east of Carlson Library, is the residence of the president.

NAIR RESIDENCE HALL provides housing for 450 students and is located on Main Street.

PEIRCE SCIENCE CENTER AND PLANETARIUM between Greenville Avenue and Chandler Dining Hall, provides modern classrooms, laboratories, and offices for Physical Science, Biology, Chemistry, Geography, and Mathematics, a 250 seat lecture hall, and a planetarium.

RALSTON RESIDENCE HALL houses 200 students and is situated on the hill just behind Chandler Dining Hall.

RIEMER COLLEGE CENTER is at the north corner of Wilson Avenue and Payne Street. It offers an attractive lounge, snack bar, cafeteria, meeting rooms, recreation area and coffee house circuit.

SPECIAL EDUCATION CENTER, at the corner of Eighth and Greenville, houses the reception area of the Educational Appraisal Clinic, the Speech and Hearing Clinic and their respective therapy rooms, along with some faculty offices and classrooms.

STEVENS HALL, attached to the Special Education Center on Greenville Avenue, provides additional college classrooms and faculty offices for education and special education programs.

THE DANA S. STILL HALL OF BUSINESS ADMINISTRATION AND THE GEORGE R. LEWIS COMPUTER CENTER are in a single building on the north campus at Main Street and Ninth Avenue.

THORN HOUSES #1 and #2 are located on Thorn Street and hold offices for the Military Science Department (ROTC).

TIPPIN GYMNASIUM-NATATORIUM stands at the north corner of Payne and Greenville Avenue. It houses classrooms, offices, and gym areas for physical education, a 3,600 seat arena for varsity sports, and a natatorium.

WILKINSON RESIDENCE HALL houses 450 students on the Main Street area of the campus.

WOOD STREET HOUSE contains offices for Career Placement Services.

VENANGO CAMPUS

RICHARD C. FRAME CLASSROOM BUILDING is a modern building containing classrooms, laboratories, and college offices.

ROBERT W. RHOADES CENTER provides student lounge and recreational facilities, a gymnasium, an auditorium-theater, bookstore, and snack bar.

THE CHARLES L. SUHR LIBRARY BUILDING provides library and study facilities.

STUDENT AFFAIRS

Donald A. Nair, Ed.D., Vice President for Student Affairs

Office: 220 Egbert Hall
Telephone: 226-2351

Clarion University is concerned not only with the academic development of young men and women, but also with their development as mature, self-confident, socially competent adults. To assist this development, various student personnel services are provided. These services enable those enrolled in the university to perform more adequately as students and to derive benefits from the academic, cultural, and social and recreational opportunities offered by the campus environment. In addition, every administrative and teaching member of the faculty is charged with the responsibility of assisting students to select and achieve goals consistent with the ideals of a university community.

STUDENT PERSONNEL SERVICES

UNIVERSITY-SUPERVISED HOUSING — RESIDENCE HALLS

The University Housing Policy states, "The University considers the residential experience to be an important part of student's educational program. Housing space will be distributed in proportion to the demand by class with special consideration given a student upon recommendation by either the Student Affairs Staff, Health Center or Counseling Staff."

Within each residence hall, there is a cross-section of students representing most aspects of the highly divergent student body, and the housing assignments are made without regard to race, religion, color, ancestry, or national origin. Hall and roommate preferences stated on housing applications are given consideration in making assignments and are honored whenever possible.

The contract for assignment to residence halls is for an entire semester unless otherwise specified. The only grounds for an automatic release from the contract are withdrawal from the University or a change in student teaching or internship assignment. Students who marry during the period of the contract are usually released upon request, but it cannot be guaranteed that these or any other requests for releases will be granted either in Commonwealth or privately-owned facilities.

Housing and food service fees are payable at the same time that other university fees become due. Refunds cannot be made unless the student withdraws from the university or is granted a contract release. The amount refunded for housing fees is listed in the "Refunds" section of this catalog. Food service fee refunds are governed by a prorated schedule available in the Business Office.

A separate housing and food service application must be submitted for each year. All students returning to residence halls must submit a housing application card at the announced time. Housing information and applications will be mailed to new students prior to registration. After a room assignment is made, the student will be issued contracts to be signed and returned with a non-refundable deposit.

Housing and food services are provided only on a combined basis for students living in the residence halls. Housing and food service contracts may not be transferred or assigned. The meal ticket may be used only by the student to whom it is issued, and a room may be occupied only by the student to whom it is assigned.

Student rooms in the residence halls are furnished with beds, desks, chairs, dressers and closets. Students should plan to furnish pillows, blankets, linen, bed spreads, and small throw rugs. Radios and record players are permitted if they are operated with due consideration for others.

Students are not permitted to keep guns or firearms in their on-campus living quarters. The Department of Public Safety will store these types of articles for students. Students are free to check these items in and out of the Department of Public Safety at their discretion.

OFF-CAMPUS HOUSING

Students not residing in University-supervised housing live in fraternity houses, rental facilities in the community, or at their own homes. The Housing Office maintains a limited listing of available housing in the community. Householders listing available facilities must comply with all local, state, and federal regulations pertaining to rental units. Other sources of information are local newspapers and realtors.

All arrangements for housing in the community are a business arrangement between the student and the householder. The University does not approve or make recommendations to private, off-campus housing accommodations.

FOOD SERVICE

Wholesome, well-balanced meals are provided in Chandler and Forest Manor by a reputable food service company. All students living in residence halls are required to eat their meals in a dining hall. Students not living in residence halls may contract for their meals at Chandler Hall on a semester basis.

STUDENT DEVELOPMENT SERVICES

Student Development Service provides academic support services to students who may encounter some form of difficulty with their academic subjects and/or basic skills. Those students who are having trouble understanding basic concepts, ideas or mechanical processes can receive content tutoring in most lower division subjects. Students who are experiencing difficulty with reading comprehension, note taking, and/or time management can receive assistance in Reading/Study Skills.

The tutorial sessions give students the opportunity to receive in-depth clarification and to identify and apply specific reading/study skills required in their academic programs. Most sessions are one-to-one or small group interaction.

EDUCATIONAL OPPORTUNITIES PROGRAM

As a University committed to the academic development of all its students, Clarion has established the Educational Opportunities Program in

order to provide the additional academic support services many non-traditional students require for success in higher education. Comprised of three separate Programs — Act 101, Special Services and Upward Bound — E.O.P. serves as the students' first contact in receiving comprehensive advising, counseling, and tutoring.

Students interested in this type of individualized, intensive support should contact the Director of the Educational Opportunities Program, Clarion University of Pennsylvania, Clarion, Pa. 16214.

ACT 101

Students enrolled in the Act 101 Program participate in a six-week Pre-college Summer Experience. Participants can earn up to six academic credits for courses in English and Math, and also complete seminars in Reading/Study Skills, Speech, and Personal Development. In addition, participants receive an extensive orientation to university life. During both the summer and the academic year, support services offered include financial aid counseling, individual analysis of study habits and supervised study sessions, and assistance in career planning and decision making. Finally, the program sponsors extracurricular activities intended to enrich the student's total experience. Students accepted into this program must meet eligibility requirements as established by the institution and the Pennsylvania System of Higher Education.

SPECIAL SERVICES PROGRAM

Students admitted to the Special Services Program are provided support services which include tutoring, academic advising, and career and financial aid counseling. During the academic year, special topic seminars dealing with academic "survival" and special sections of English 110: Basic Composition and General Studies 100: Reading/Study Skills are offered. The Program is also designed to provide physically handicapped students enrolled at the University with additional support services. Students accepted into the Program must meet academic and financial eligibility criteria established by the Program and the U.S. Department of Education.

PROJECT UPWARD BOUND

As part of the university's commitment to serve the community, Clarion's Upward Bound Program is designed to generate in selected area high school students the academic skills and motivation necessary

for success in college. The program operates in two segments — the Academic Year Component and the Summer Residential Program. Support services such as tutoring, visits to post-secondary educational institutions, career and personal counseling are provided year-round. The six-week Summer Residential Program offers program participants an opportunity to experience college life while residing on campus. Students receive intensive basic skills instruction and exposure to a variety of cultural and social activities on and off campus. Students are chosen for the program based on eligibility criteria as established by the Program and the U.S. Department of Education.

READING/STUDY SKILLS

Instruction in reading/study skills is available through course work and individual tutoring. Areas covered by instruction and tutoring are notetaking, listening, time management and comprehension.

G.S. 100 — College Reading/Study Skills is a two-credit course offered each semester. Students will be helped to identify and apply the specific reading/study skills required in their academic program.

Any student may request individual evaluation and tutoring. This is especially recommended for those students having limited problems, as well as for those students needing long-term assistance.

STUDENT HEALTH INSURANCE

In order to ease the financial burden which could result from serious or extended illness or injury, Clarion University expects all students to participate in a group insurance plan negotiated by the University which covers the students wherever the illness or accident may occur. Those students who have other insurance coverage equal or better than the coverage of the group plan offered are not expected to purchase this policy offered through the university.

COUNSELING AND CAREER PLANNING CENTER

Center staff provides professional services related to developmental, educational, and vocational goals as well as to problems of personal, social, and emotional adjustment. The services of the Center are available without charge to all regularly enrolled Clarion University students.

Most students request counseling on their own initiative. Some, however, need encouragement from others to seek counseling assistance. These students may be referred by instructors, academic

advisors, residence hall staff, administrators, parents, or fellow students. Those seeking counseling services are not just the marginal or immature students; frequently the exceptionally able and conscientious students require the benefit of professional help in the counseling setting.

In keeping with accepted professional practice, counseling contacts with students are strictly confidential. No information is released to officers of the administration, faculty members, parents, graduate schools, governmental officials, or other outside agencies without the student's written authorization in advance. Rare exceptions to the above policy may occur when, in the counselor's professional opinion, there is a clear, immediate threat to the life or welfare of the student himself, or other students, or the community at large.

HEALTH SERVICE

The Student Health Service is located in the Edward J. Keeling Health Services Center at the corner of Wood Street and Wilson Avenue. The Health Service provides for general health care needs of enrolled students.

The Health Service is staffed by registered nurses 24 hours per day, seven days a week for out-patient and in-patient care. A physician is present and holds regular hours throughout the week and is available on emergency call from the nursing staff during nights and weekends. Students with routine illness and minor injuries will be seen by the physician only during the regularly scheduled clinic hours.

In addition to illnesses and injuries, routine physical examinations, and information counseling, some immunizations and allergy or other injections prescribed by personal physicians are available.

Most commonly used medications are available to students on physician's orders. Some less used medications must be prescribed and purchased at a pharmacy by the student. Medical equipment such as crutches, canes, slings, braces, etc., are available and may be loaned to students.

House calls are not made by the Health Service Staff and only under emergency circumstances are calls made to a residence hall.

A student is expected to provide his own transportation to and from the Health Service, except for emergencies as determined by the Health Service staff or a university official. Transportation to and from the Health Service and/or to and from the Clarion Community Hospital for laboratory studies or other medical services is also determined by the above regulations.

Ambulance transportation to surrounding hospitals will be at the student's expense.

The Health Service has no x-ray facilities and limited laboratory facilities. For the vast majority of these studies, the facilities of the local

hospital are utilized on a physician's written order for the type of examination desired at the student's expense.

All students are strongly encouraged to enroll in the university sponsored insurance program, or carry protection through a family hospitalization insurance program.

See page 53 for detail on Health Center fees.

CAREER PLACEMENT SERVICES

The Office of Career Placement Services provides services related to career information and placement to all students and alumni who desire them. Seminars are conducted for juniors and seniors concerning necessary job entry skills. Graduate school information is also maintained along with various test applications for entry into graduate school.

The Office of Career Placement Services assists Clarion University graduates in obtaining entry-level positions and advanced-level positions, as well as part-time and summer jobs. Vacancy notices are received from educational systems, government agencies, business, industry, and various organizations. These notices are relayed to interested persons. Assistance is provided to university students and personnel officials in arranging employment interviews. Placement credentials are prepared and distributed, upon request, to prospective employers in support of the applicant's candidacy. A listing of graduates, including their home address, phone number, and area of concentration is prepared and mailed to prospective employers, upon request, to facilitate the graduate in obtaining a position. Any student who does not wish to be placed on the list may have his/her name removed upon request.

Services are provided for students seeking career information, career changes, resume and credential preparation, application completion, interviewing techniques and procedures, and various state certification requirements for education. Current seniors, as well as graduates of former years, are urged to maintain their contacts with the office as a means of facilitating professional entry and promotion.

Effective July 1, 1982, a fee of \$10.00 shall be charged for placement registration and services.

PARKING AND AUTOMOBILE REGULATIONS

All provisions of the Vehicle Code of the Commonwealth of Pennsylvania as supplemented by parking regulations issued by the Secretary of Education will be strictly enforced on the Clarion University Campus. Authority for such enforcement rests with the Director of Public Safety. Persons failing to pay fines will be reported to the District Magistrate and

upon conviction will be subject to penalties provided by law.

All persons who possess, maintain, or operate a motor vehicle on campus are required to register such vehicle with the Department of Public Safety. Registering a vehicle does not guarantee a parking space.

1. Persons qualifying for campus parking privileges will be issued a decal indicating that this privilege has been granted and will be assigned to a specific parking area.
2. Any person acquiring the use of a motor vehicle after the regular registration period who intends to operate the vehicle on campus must register the vehicle within twenty-four hours with the Office of the Director of Public Safety. Motor vehicles must be registered even when their use is intermittent rather than regular.



STUDENT ACTIVITIES

Student activities at Clarion are viewed as another means of self-development. Therefore, the responsibility for the success of any activity or organization must rest with the students involved and ample opportunity exists for gaining experience in leadership and self-government.

STUDENT GOVERNMENT

Through participation in student government, students have an opportunity to gain experience in democratic living and self-government. All students become members of the Clarion Students' Association upon payment of the CSA activity fee and, thereby, are eligible to participate in the election of the Student Senate, the governing body of the Association. The Student Senate is responsible for expenditure of student activity fees through allocations to the various activities and organizations. The Senate has an important relationship to other Association operations such as the University Book Center and the Student Centers. It also appoints student representatives to various standing committees of the university.

Other opportunities for self-government are provided through the governing boards of the Panhellenic Council, Interfraternity Council, University Center Board, Inter-Hall Council, and residence hall councils.

The full utilization of this leadership is a very necessary element of success in any college or university and the maximum development of the leadership potential of each student must be considered an important part of the educational process. It is a well established fact that even though a university may have an excellent faculty and physical plant, it cannot attain true excellence unless it also has a capable and energetic student body able and willing to accept the responsibilities inherent in leadership.

ACTIVITIES PROGRAM

The purpose of an extensive and varied activities program on campus is to make the University experience richer and more enjoyable. Clarion is fortunate to have a wide variety of activities available to its students.

Many of the major cultural and entertainment functions are sponsored by committees of the University Center Board from student activity fees allocated to it by Student Senate. Examples of such programs are Homecoming Weekend, coffeehouses, campus movies, Miss C.U.P. Pageant, pop concerts, and special performances by noted orchestras, drama groups, speakers, etc. The Black Arts Festival, intercollegiate athletics,

and music and drama performances by CUP students and staff are important parts of the total activities program. Honoraries, clubs, and special interest groups further round out this program with speakers, movies, and service projects on and off campus.

Although many of these activities take place in Chandler Dining Hall, the Chapel, Marwick-Boyd Auditorium, and Tippin Gym, the two basic facilities for students are Harvey Hall and Riemer Center. Harvey Hall provides facilities for table tennis and games; a meeting area; vending area; offices for various student organizations; and the office of the Coordinator of Student Activities. Riemer Center provides a snack area with adjoining coffeehouse, TV lounge, conference room, games area, listening room, Center Board Office, and the office of the Director of University Centers.

The following professional organizations and special interest groups are active on campus. Information on athletics, musical groups, speech activities, student publications, and fraternities and sororities is included later in this section.

HONORARY ORGANIZATIONS

Alpha Mu Gamma (Foreign Language)
Alpha Psi Omega (Dramatics)
Beta Beta Beta (National Biology Honorary)
Gamma Theta Upsilon (Geography)
Kappa Delta Pi (Education Honorary)
Kappa Kappa Psi (Honorary Band Fraternity)
Lambda Sigma (Library Science Honorary)
Omicron Delta Epsilon (Economics Honorary)
Phi Alpha Theta (History)
Phi Beta Alpha (Business Honorary)
Phi Eta Sigma (Freshman Honorary)
Pi Kappa Delta (Forensics)
Pi Mu Epsilon (Math Honorary)
Psi Chi (Psychology Honorary)
Sigma Tau Delta (English Honorary)
Tau Beta Sigma (Honorary Band Sorority)

MEDIA ORGANIZATIONS

Call
Sequelle

Radio Stations — WCCB (AM) and
WCUC (FM)

SPECIAL INTEREST GROUPS

Accounting Club	Investment Club
Alpha Phi Omega	Jewish Student Union
American Chemical Society	Judo Club
Anthropology Association	Koinonia Christian Fellowship
Art Club	Lab Jazz Band
Association for Childhood Education International	Library Media and Information Science Society
Bios Club	Lyric Theater Workshop
Black Student Union	Madrigal Singers
Brass Choir	Management Association
Business Association	Marching Band
Chemistry Club	Marketing Association
Chess Club	Math Club
Circle F	Music Educators National Conference
Circle K	Music Marketing Association
Circle of Stones	Muslim Student Association
Clarion International Association	National Students Speech, Learning, and Hearing Association
University Center Board	Nigerian Student Association
University Community Symphony Orchestra	Pennsylvania State Education Association
University Players	Percussion Ensemble
University Readers	Pershing Rifles
University Republicans	Photography Club
Commonwealth Association of Students	Pre-Law Club
Concert Band	Psychology Club
Concert Choir	Russian Club
Council for Exceptional Children	Science Fiction and Fantasy Club
Data Processing and Management Association	Sigma Tau Alpha
Debate Team	Sisters, Inc.
English Club	Society of Collegiate Journalists
Fellowship of Christian Athletes	Society of Physics Students
French Club	Sociology Club
German Club	Spanish Club
Gospeliers	Symphonic Band
Health Careers Club	Young Democrats
History Club	
Individual Speaking Events	
International Association of Business Communicators	

ATHLETIC PROGRAM

INTERCOLLEGIATE ATHLETIC competition plays an important role in the lives of Clarion students. Clarion University is affiliated with the N.C.A.A. and E.A.I.A.W.

The present athletic program includes varsity competition for men in baseball, basketball, cross country, football, golf, swimming, track, and wrestling. Competition for women includes basketball, gymnastics, cross country, softball, swimming, tennis, track and field, and volleyball. Co-ed competition is offered in bowling, judo, and rifle.

Facilities for intercollegiate athletics include the Memorial Stadium and the Waldo S. Tippin Gymnasium-Natatorium. The stadium will seat approximately five thousand spectators for football and track, and has dressing rooms for varsity and freshman teams in football, baseball, and track, with separate visiting team dressing, shower, and locker rooms. The football field is surrounded by an all-weather track. The facility also includes a baseball diamond and field, practice football fields, and parking areas for several hundred cars. The Gymnasium-Natatorium, seating approximately four thousand spectators, provides year-round physical education and athletic activities and services.

INTRAMURAL ATHLETICS are provided for men and women students by funds from student activity fees allocated by the Student Senate. The program is planned and supervised by the Department of Health, Physical Education and Recreation. Intramural competition includes touch football, soccer, volleyball, squash, handball, chess, bowling, table tennis, basketball, bridge, "500," wrestling, badminton, archery, billiards, swimming, softball, track and field, water basketball, golf, paddleball, and other areas where interest is sufficient.

MUSIC PROGRAM

CONCERT CHOIR. Membership in the Concert Choir is by audition only. Auditions are held at the beginning of each semester, and membership is open to any student who can satisfactorily pass the audition examination. The Concert Choir has a long and distinguished history as a performing group.

LYRIC THEATRE WORKSHOP. The purpose of the Lyric Theatre Workshop is to offer interested students the opportunity to express their artistic talents and interests in studying and performing literature of the musical theatre. Participants are involved in all facets of stage production including set design and construction, costumes, lighting, staging, set management, props, musical and dramatic direction, makeup, sound and acoustics, instrumental and vocal performance, and dance-choreography. The workshop is open to all students of the college.

MADRIGAL SINGERS. A highly select group of advanced students

who possess the techniques and voice which are vital to this specialized area of music. This group is flexible and varies in number from sixteen to twenty voices, depending upon the compositions to be performed. The literature presented by the ensemble represents some of the finest music ever written for voice.

MARCHING BAND. Ranked as one of the finest university bands in Pennsylvania, the 120 member Marching Golden Eagles has continued its traditionally outstanding musicianship and marching finesse.

The ideals of the band are geared first to develop musicianship and marching precision; second, to inspire and encourage academic achievement; third, to develop character; and fourth, to develop outstanding leadership ability.

The band appears at all gridiron events and is host to the annual band parents' day and alumni band day events.

A Marching Band Revue culminates the season of performances and travel.

SYMPHONIC BAND is a skilled ensemble of ninety wind and percussion players. Membership is dependent upon the outcome of the audition and particular instrumental needs.

Purposes of the Symphonic Band are to perform literature of the highest aesthetic value, with an emphasis on original works for band; to attain perfection in performance ability through rigid requirements for individual musicianship and advanced playing technique; and to provide a means for artistic expression through participation in a distinctive medium of musical expression.

The repertoire of the band is selected from all periods and styles of composition and is designed to meet a variety of program responsibilities.

The Symphonic Band is featured in two major concerts each year and an Annual Spring Tour. Guest artists and clinicians appearing with the band in recent years include Rafael Mendez, Bob Lowry, Warren Covington, James Burke, Frank Arsenault, Roy Burns, James W. Dunlop, William Bell, Martin Mailman, Robert Washburn, and Roger Pemberton.

SYMPHONY ORCHESTRA is a specialized ensemble of approximately fifty players, dedicated to the performance of mainstream literature for the medium. Its membership is drawn from students, faculty, and the community-at-large. The orchestra offers two major concerts each year featuring faculty and student soloists; the ensemble also assists in choral and operatic presentations as well as special projects calling for orchestral instrumentation. The ensemble tours during the spring semester each academic year. Membership is open to all qualified players by consultation with the conductor.

THE STRING ENSEMBLE provides its participants the opportunity to perform chamber music works for (and with) strings, compositions for solo instruments with string accompaniments, and compositions for strings alone. Numbering approximately twenty players, the String

Ensemble consists of students from across the campus, laymen from the community and selected high school students who intend to matriculate at Clarion University of Pennsylvania. The ensemble presents one scheduled concert each semester on the campus; the organization also offers its services to the community for special programs which may be requested. The String Ensemble sets a tour schedule each spring semester.

THE LABORATORY JAZZ BAND features a comprehensive study of various schools and styles of jazz through performance, utilizing a jazz ensemble of approximately twenty-five instrumentalists selected on the basis of playing ability. Performance literature includes representative works for large jazz band ranging from styles of the 1930's to the present, with emphasis on recent trends in composition and arranging. The Laboratory Jazz Band presents two formal concerts each year on the university campus and performs for high school and community audiences in tours throughout the Western Pennsylvania area.

THE BRASS CHOIR is a highly specialized organization offering outstanding students an opportunity to study and perform chamber music for brass. The repertoire is varied with a concentration on early music and music of the twentieth century. Exactitude of intonation, rhythmic precision, phrasing, and proper methods of attack are stressed. The number of students in the Brass Choir will vary somewhat from semester to semester depending upon the instrumentation of the compositions to be performed. Participation is by audition only.

WOODWIND CHOIR consists of all woodwind instruments regularly found in the concert band. The purpose of this organization is to perform chamber music especially arranged for this medium. Students who have had considerable playing experience on woodwinds (majors and non-majors) may join this organization. An audition is not necessary.

PERCUSSION ENSEMBLE is a highly specialized organization offering outstanding students an opportunity to study and perform chamber music for percussion instruments. Contemporary works, transcriptions of early music, music of various ethnic groups, and jazz-rock works are studied and performed with stress placed on the development of musical concepts and skills such as phrasing, balance, intonation, rhythmic precision, improvisation, and conducting. The ensemble presents percussion concerts and clinics throughout the year on campus and on tours. Membership is open to all percussion majors and other students by audition.

BRASS, STRING, WOODWIND AND SMALL PERCUSSION ENSEMBLES are organized when the talent and instrumentation are available. Membership in these groups is voluntary.

PUBLICATIONS PROGRAMS

Clarion's Call is the weekly college newspaper. Published by the Clarion Students' Association, it follows regular newspaper style and format. Staff participation is essential for Communication majors; however, anyone interested in journalistic writing is welcome. Prior experience in journalism is helpful but certainly not necessary for success. Certain editorial and business positions receive financial remuneration.

DARE, which is published under the guidance of the English Department, presents a channel of creative communication for those students whose interests and talents are in this area. This publication is the culmination of the year's best in creative writing by Clarion University students.

THE SEQUELLE is the university yearbook. The staff is comprised of students from all major fields of study. Working on the book provides students with an opportunity to display their creativity in the area of journalism and photography. Prior experience is helpful but not absolutely necessary. Professional help is available to the staff as they plan and assemble the book.

RADIO PROGRAMS. Every week the French section of the Department of Modern Languages and Cultures at Clarion presents in French "Voix De France," a French cultural program which covers political news, cultural aspects, and literary works of all nations where French is the official language.

The Russian section of the same department regularly presents the rich cultures and literature of the USSR.

Both programs are broadcast by the campus FM radio station, WCUC. Language students and faculty of the modern Language Department contribute to both programs.

RELIGIOUS PROGRAMS

Clarion University welcomes students of all religious backgrounds. The following programs are available:

THE NEWMAN CLUB is a religious organization which attempts to meet the needs of students and faculty of any religious denomination at Clarion University. The Newman Club is under the supervision of the Catholic Diocese of Erie and a priest is assigned to the university. The Newman Club provides an office with a meeting lounge which is located at 729 Main Street, across from the main entrance to the Catholic Church. The phone number at the Newman Club office is 226-6869.

JEWISH STUDENT ASSOCIATION. Students of the Jewish faith are welcome at the Tree of Life Synagogue which is located in Oil City, Pennsylvania, approximately twenty-five miles from the campus. The Tree of Life Synagogue has an active congregation made up of families

who live within about a forty mile radius of Oil City, including several families from the Clarion area.

The J.S.A. also sponsors an active program on the C.U.P. campus.

KOINONIA CHRISTIAN FELLOWSHIP is an active organization on campus. Ten student leaders are in charge of various ministries. The group sponsors weekly fellowship meetings, dorm Bible studies, challenging lectures, teaching seminars, teams of students who visit and evangelize, Christian films, etc.

Koinonia also has its own singing group, The New Creation Singers, and Gospel Puppet Ministry, Koinonia Outreach Puppeteers, which conduct local church services upon request.

Koinonia, which is inter-denominational, encourages Christian collegians to attend and participate in the local church of their choice. Faculty advisor for the group is Dr. George Shirey of the Geography Department; Reverend Samuel Serio, an ordained minister, serves in an advisory capacity.

SOCIAL PROGRAM

SORORITIES provide an opportunity for women students to develop close friendships within a group whose aims are common with their own. They promote scholarship, cultural interests, service projects, and participation in campus activities. The national sororities are Alpha Kappa Alpha, Alpha Sigma Alpha, Alpha Sigma Tau, Alpha Xi Delta, Delta Zeta, Phi Sigma Sigma, Sigma Sigma Sigma, and Zeta Tau Alpha.

PANHELLENIC COUNCIL is the advisory governing board of all Clarion University sororities. The council promotes cooperation and coordination of activities and standards among sororities and between sororities and fraternities. Two representatives from each of the eight sororities on campus comprise the membership of the council. A major social activity planned jointly by Panhellenic and Interfraternity Council is Greek Week which is held during the spring semester. The council also sponsors several community service projects throughout the academic year.

FRATERNITIES. Chapters of eight national fraternities, Alpha Chi Rho, Alpha Phi Alpha, Kappa Alpha Psi, Phi Sigma Kappa, Sigma Chi, Sigma Phi Epsilon, Tau Kappa Epsilon, and Theta Chi, in addition to two locals, Phi Sigma and Sigma Tau, are located on campus. Members of several of these organizations live in chapter houses near the campus.

INTERFRATERNITY COUNCIL is the governing organization of the fraternities and is composed of representatives of the ten fraternities. Under the provisions of its constitution, it is responsible for the coordination of fraternity programs, pledging activities, and the arbitration and adjudication of violations of I.F.C. policies. In addition, it works actively with the Panhellenic Council to enhance the position and welfare of all Greek letter organizations on campus.

SPEECH AND DRAMATICS ORGANIZATIONS

PI KAPPA DELTA is a national honorary society in forensics. Active debate and individual events team members earn the right to membership in Pi Kappa Delta.

ALPHA PSI OMEGA is a national honorary dramatics fraternity. This organization attempts to further the student's knowledge of and involvement with theatre. The chapter sponsors the Alpha Psi Omega memorial scholarship fund which grants theatre awards to deserving students.

INDIVIDUAL SPEAKING EVENTS TEAM is open to all students interested in competitive speaking. Members compete in persuasive, informative, humorous, extemporaneous, and impromptu speaking, as well as in oral interpretation. Tournaments are held at colleges across the country, and to date the team has traveled to twelve states.

DEBATE TEAM is open to any student interested in intercollegiate debating. Clarion competes nationally and has attended tournaments in Louisiana, Arizona, Florida and Washington.

UNIVERSITY THEATER, the campus dramatics organization, is open to all students interested in gaining experience in performance and technical aspects of theater. Students are welcome to participate in the four major productions, student-directed plays, and the Summer Drama Workshop.

NEW STUDENT ORIENTATION

All new students are expected to attend one orientation session prior to their matriculation. Usually nine separate sessions of two days duration are conducted between the third week in June and the end of July. Parents are welcome and encouraged to attend with their sons and daughters.

The primary objective of the program is to aid entering students in making the adjustment to life at Clarion. In order to facilitate that adjustment and allow students to pursue their education in the best possible manner, the academic and extra-curricular phases of university life are experienced and explored in large and small groups. Pre-registration information and scheduling for fall semester classes culminate the program. Such academic advisement as is possible is conducted during this time.

Registration forms and instructions for the Summer Orientation Program will be mailed during the spring semester prior to enrollment. Students entering in January also attend orientation during the summer.

GENERAL INFORMATION

ACADEMIC ADVISEMENT

PURPOSE

It is the purpose of the academic advisement program at Clarion University to:

1. Assist students in their growth and development
2. Promote advisor-advisee relationships characterized by trust, mutual respect, and openness
3. Provide guidance and support for students in their course of academic development through a spirit of shared purposes and freedom of choice in their academic programs
4. Encourage students to take an active role in developing and completing a sound academic program
5. Establish a climate of purposeful learning which maximizes student growth and minimizes student withdrawal.

ADVISOR ROLES AND RESPONSIBILITIES

In the advisor-advisee relationship, the student is primarily responsible for seeking academic advisement from the advisor. The central roles and responsibilities of the advisor are:

1. To assist the student in developing a sound academic program by:
 - a. Exploring with each student his/her interests, abilities, and goals
 - b. Assisting the student in developing an academic plan that satisfies graduation requirements
 - c. Offering advice in the selection and sequencing of courses which meet requirements for general education, major, and electives
 - d. Helping the student explore career options that are consistent with his/her program of study
 - e. Monitoring student progress and helping the student make desired adaptations in his/her program
2. To make known to students the programs, resources, and services available in the university that may offer information/assistance at the student's particular stage of academic or career development
3. To establish a relationship of trust and openness which will allow the student to become increasingly self-directing

4. To be a responsive listener to the student in areas of his personal concern and to assist him/her by referral to specialized sources of help when needed
5. To discuss matters of general university adjustment with the student
6. To keep informed about university policies, regulations, programs, and procedures in order to answer accurately student questions and concerns.

STUDENT ROLES AND RESPONSIBILITIES

The student must bear ultimate responsibility for the development of his/her academic program and for meeting all graduation requirements.

In the advisor-advisee relationship, the responsibilities of the student are:

1. To meet with his/her advisor as frequently as is necessary to keep the advisor informed about changes in progress, course selection, career goals, and preregistration.
2. To seek sources of information which will assist him/her in making life/career decisions
3. To contact the advisor when confronted with major academic problems and to keep the advisor aware of other problems which may affect his/her academic performance
4. To be an active participant in the advisor-advisee relationship and to become increasingly self-directing in his/her development as a student
5. To meet all graduation requirements, following the academic plan established by the student in consultation with his/her advisor
6. To maintain personal records of academic progress and to resolve any discrepancies on the official grade reports
7. To become knowledgeable about university regulations, program requirements, and procedures

ACCELERATED PROGRAM

Students who take three summer terms of ten weeks each may finish the four-year course in three years.

ADVANCED PLACEMENT

See Credit by Examination statement.

AWARDS

CHEMISTRY DEPARTMENT

Outstanding Freshmen Chemistry Major:

Chemical Rubber Company

Junior Award In Analytical Chemistry:

Division of Analytical Chemistry of the American
Chemical Society

Outstanding Senior Awards:

Society for Analytical Chemists of Pittsburgh
American Institute of Chemists

ENGLISH DEPARTMENT

Max A. Nemmer Award:

This award in memory of the late Dr. Max A. Nemmer, Professor of English at Clarion from 1960 to 1973 is given annually to the outstanding English graduate. The award is granted on the basis of scholarship and unusual contributions to the Department. Recipients are recognized on a wall plaque kept in the English Department office and by a small stipend.

CORRESPONDENCE DIRECTORY

Academic Affairs

Vice President for Academic Affairs and/or
Associate Vice President for Academic Affairs

Admissions

Director of Admissions

Alumni Affairs

Alumni Secretary

Business Affairs, Fees, Refunds

Business Manager

Certification

Dean of Education and Human Services

Courses and Curricula

Appropriate College Dean

Credentials

Career Placement Services

Educational Opportunity Program

Director

Readmissions and Withdrawals

Associate Vice President for Academic Affairs

Student Affairs, Organizations, Activities
Vice President for Student Affairs
Summer Classes
Dean of Summer Sessions
Transcripts and Records
Records Office

Address for all above named officials:
Clarion University of Pennsylvania
Clarion, Pennsylvania 16214

COURSE NUMBERING

Courses numbered 100 to 299 inclusive are primarily for Freshmen and Sophomores: 300 to 499 for Juniors and Seniors. Some courses numbered between 400 and 499 are acceptable for graduate credit. Courses numbered above 500 carry graduate credit.

The University reserves the right to change the sequence and number of courses.

CREDIT BY EXAMINATION

1. C.L.E.P.

A maximum of 60 credits may be earned through the College-Level Examination Program (C.L.E.P.) administered by the College Entrance Examination Board. These Examinations are designed to evaluate college-level education gained through prior education or training, particularly independent study, work experience, or armed service training. The College-Level Examination Program includes: a five-area General Examination which, if successfully passed, will grant 30 credits or the freshman year's work, and approximately 50 subject examinations granting subject credits upon successful completion. Details on minimum scores and credits granted for both the general and subject examinations are available in the Office of Academic Services.

2. C.E.E.B.

Students may also earn credit and advanced standing through the Advanced Placement Program of the College Entrance Examination Board. This program is designed for high school students who expect to enter college and who have participated in one or more of the advanced classes while in high school. There are eleven subject areas in this program and any high school student who earns a score of three or better in a subject area will be granted three credits. The National Advanced Placement Examinations are given in May of each year.

3. Transfer of Credits Earned by Examination

For transfer students, credits granted by way of C.L.E.P. or Advanced Placement Examinations at other accredited institutions will be accepted if the minimum scores on such examinations meet the minimum standards of Clarion University.

4. Proficiency Examinations

Course credits not to exceed 38 semester hours may also be earned by proficiency examination for advanced college work administered by the departments in which the particular proficiency is taught. Students who appear to possess a proficiency equal to or greater than that required in a particular course may make application for such an examination in the Office of Academic Services; the chairman of the subject area concerned will determine the validity of the application. Minimum qualifications for proficiency examination applications are as follows: first semester freshmen must have scored 550 or above in the verbal on the SAT; students other than first semester freshmen must have a quality point average of 2.50 or above; in no case may a student earn credit for a course more than once for any given subject. A fee of \$25.00 is charged for each examination taken.

5. Credit for Life Experience

Clarion University may grant credit for life experience based upon careful evaluation of such experience. For information, one may contact the Academic Affairs Office, the dean of the College in which he/she is enrolled, or the chairman of his/her major department.

EVENING CLASSES

Evening classes are organized each semester for the convenience of regular students, in-service teachers, and others who may be interested in college courses. Work done in these courses give customary college credit and may be applied toward a degree. Information concerning course offerings may be secured by writing to the Office of Academic Services. Evening classes are part of the regular university program and are an extension of the usual day schedule.

GRADE RELEASE POLICY

Public Law 93-380 (The Family Educational Rights and Privacy Act of 1974) prohibits the release of educational records, other than to certain defined exceptions, without the student's consent. One such exception is Section 438 (b) (1) (H) which allows release of educational records to, "Parents of a dependent student of such parents, as defined in Section 152 of the Internal Revenue Code of 1954."

Under the provisions of Section 438, the Academic Affairs Office will send grades to parents. Students who are not dependents, meaning they are not so claimed by parents for income tax purposes, may have their grades withheld from their parents by filing a request at the Records Office that their grades are not to be sent home.

INDEPENDENT STUDY

Independent study opportunities are available to students dependent upon faculty and financial resources available. Acceptance of students for independent study is voluntary on the part of a faculty member and must be approved by the appropriate department chairman, college dean, and the Vice President for Academic Affairs. Students accepted for independent study are upon request entitled to five hours of faculty time for each hour of independent study credit carried.

NONDISCRIMINATION ON THE BASIS OF HANDICAP

Federal Law (Section 504 of the Rehabilitation Act of 1973) provides that no qualified handicapped person shall, on the basis of handicap, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity that receives or benefits from federal financial assistance. This provision of law applies to Clarion University and the effect of this law is to ensure that:

- (1) no one may be excluded from any course, or course of study, on account of handicap;
- (2) classes may be rescheduled for students with mobility impairment if they are scheduled for inaccessible classrooms;
- (3) academic degree or course requirements may be modified in certain instances to ensure full participation by handicapped students;
- (4) alternate methods of testing and evaluation are available in all courses offered by the university for students with requirements for such methods;
- (5) auxiliary aids are made available by the university for students with impaired sensory, manual, or speaking skills;
- (6) certain campus rules and regulations may be waived if they limit the participation of handicapped students; and
- (7) housing opportunities, employment opportunities, and other opportunities for handicapped students are equal to those of non-handicapped students.

As part of the university registration process, students are provided with a form on which they may list any special accommodations required

due to handicap. If a student experiences difficulty in obtaining such special accommodations, the student may submit an appeal or grievance to the department head or other university official responsible for the accommodations and, if necessary, to the Section 504 coordinator.

RESERVE OFFICERS' TRAINING CORPS (ROTC)

Clarion University of Pennsylvania hosts a detachment of the US Army Reserve Officers' Training Corps. Enrollment in ROTC incurs no military obligation and allows the option of competing for an ROTC scholarship. Successful completion of the Advanced course ROTC program and upon graduation from Clarion, the student will receive a commission as a Second Lieutenant in the United States Army. Newly commissioned officers either serve on active duty or serve with the Army Reserve or National Guard.

Students seeking advanced degrees can be granted an educational delay following completion of their baccalaureate degrees. Additional information can be obtained at the Military Science Department office. Curriculum details are presented elsewhere in this catalog.

RESIDENCE REQUIREMENTS

To be eligible for a baccalaureate degree at Clarion University, a student must earn a minimum of 30 semester hours credit in residence. These 30 semester hours must be approved by the appropriate college dean and department chairman of the academic area in which the degree is to be granted.

SECOND BACCALAUREATE DEGREE

Students may earn a second baccalaureate degree at Clarion by completing a minimum of 30 credit hours (excluding physical education activities) beyond those taken for the first degree and by completing all of the requirements for the second degree. Students who remain in continuous residence at Clarion University after obtaining one degree may go on to finish the second in a total of 158 credit hours, but students who have been graduated from Clarion and left the university and students who have a baccalaureate degree from another institution, must complete a minimum of 30 additional credit hours for a second degree regardless of the number taken for the first degree.

It is not necessary to complete a second degree in order to earn a second major. The student seeking a second major must fulfill all requirements for that major but may choose not to meet requirements

related to earning a second degree. For example, a student working toward the B.A. degree with a certain major may wish to earn teaching certification for that same field and can schedule a good share of the courses required for certification as free electives. As a result the student may be able to complete all teacher certification requirements without earning a total of 30 credits beyond the 128 required for the B.A., as would be necessary to achieve the addition of the B.S. in Education.

STUDENT RECORDS

Student academic and personal records are confidential in nature and shall be released only to appropriate faculty and administrative officers and to parents and guardians if the student is a dependent. Release of these records to other persons, institutions, or governmental and legal agencies shall occur only upon approval by the student or graduate or upon subpoena.

Transcripts of academic work are available to the student or graduate at the Records Office when requested by him or her in writing. The first transcript is free; thereafter, the charge is \$3.00 per transcript.

Clarion University uses students' social security numbers solely for identification and recordkeeping purposes. Disclosure of the SSN is not mandatory and alternative identification numbers will be issued if requested.

STUDENT RESPONSIBILITY FOR ACADEMIC PROGRAM

Each student is individually and personally responsible for learning the requirements of the curriculum which he or she is following and for seeing that these requirements are scheduled and completed for graduation. It should also be understood that information and policies presented in this catalog are subject to change before a new edition is published. However, curriculum and program changes occurring after a student has entered a program are not made retroactive for that student.

POLICY ON CLASS ATTENDANCE

Clarion University of Pennsylvania regards student participation in class as essential to the learning process. Therefore, regular classroom attendance is required of all students. Faculty members determine the absence policies for their own classes, except that participation in university sanctioned activities will be excused and the student will be given reasonable assistance when class work is missed. It is understood that absence does not excuse the student from course work and the responsibility to complete assignments on time. If a student knows that a class must be missed, the instructor should be notified in advance and

arrangements made to complete the work. The instructor is not required to give make-up examinations or accept class work missed as a result of an unexcused absence.

INTERNATIONAL EDUCATION — STUDY ABROAD

Clarion University offers an inexpensive summer program in Mexico. Designed for students who are not majoring in Spanish, the program includes, in addition to language instruction, a variety of cultural and social experiences. Participants earn six academic credits. Many students participate in the program as an alternative means of meeting the foreign language requirements for the B.A. degree.

Clarion students may take advantage of a seven-week summer session at the University of Valencia on the Mediterranean coast of Spain. Courses in Spanish language and literature are offered at all levels, from first semester Spanish through in-service teacher graduate work. Weekend excursions in the area and a long trip include Alicante, Granada, Cordoba, Sevilla, and Madrid.

In the heart of French Canada and within a reasonable driving distance from Clarion, University of Quebec, Trois Rivières, offers programs and courses at all levels for the summer as well as the regular academic year. The Summer Program at the University of Quebec has many exciting features: large selection of courses, beautiful campus, excellent food, many cultural activities, sightseeing trips in historical Quebec Province, and the opportunity to live with French speaking families.

Among a wide choice of study programs in Germany, Clarion students have most successfully attended summer courses at the University of Stuttgart. Inexpensive housing with German families, free excursions to the Black Forest and the Alps, social events, visits to theatre and opera, field trips to Mercedes Benz and other factories are rounded off by a unique peer-tutoring system by German students.

The Committee on International Education at Clarion with the Federation of German-American Clubs in Germany, has established a one-for-one student exchange with a Clarion student sponsored at a German university while a German student studies at Clarion.

Many additional international programs on all continents are available through the Clarion Fulbright Advisor.

A program for international internships in Business is available to qualified students.

THE 1984 SUMMER SESSION

The Summer Session is maintained for the benefit of regular university students as well as for teachers in service and others. By taking

advantage of the summer sessions, teachers can secure the professional training needed to meet the requirements for professional certification. Advanced courses are offered in the summer sessions for the benefit of teachers and others who desire to secure credits toward a degree in education or for permanent certification. Workshops are being added for those interested in special problems in education. Liberal Arts, Business Administration, and Graduate courses are also an important part of the summer schedule.

Clarion is attractive to those who desire to combine work with recreation during the summer. The high elevation provides a pleasant climate, and the area offers opportunities for boating, swimming, hiking, riding, and other outdoor activities. There are two consecutive five-week periods of classes. The first starts on June 11 and ends July 14. The second starts July 16 and ends August 17. Interested students should write the Dean of Summer Sessions for particulars.

VETERANS' AFFAIRS

Clarion is approved by the Veterans Administration to offer the regular degree curricula to veterans and children of deceased veterans.

Credit for educational experience in the armed services is allowed on the basis of the recommendations of the American Council on Education.

The university grants a maximum of 4 credits in Health and Physical Education for active military service of 6 months or more with honorable discharge or continued reserve status. Credit is normally given for HPE 111, (2 credits), and 2 HPE activity courses of 1 credit each. To assure that the credit is granted, veterans should bring an honorable discharge document to the Records Office, Carrier Administration Building.

ADMISSIONS

ADMISSION OF FRESHMEN

In accordance with the principles governing admission adopted by the Commission of Presidents, four general requirements have been established for admission to Clarion University:

1. General Scholarship
2. Character and Personality
3. Health and Physical Vigor
4. College Entrance Examination Board Test or American College Test.

Applicants for admission must satisfy the following requirements as outlined in detail below:

1. General scholarship as evidenced by graduation from an approved secondary school or equivalent preparation as determined by the Division of Professional Certification and Credentials Evaluation Division of the Pennsylvania State System of Higher Education. The applicant must submit scores earned on the Scholastic Aptitude Test administered by the College Entrance Examination Board or scores earned in the American College Testing Program. Arrangements for taking these examinations are to be made through the high school guidance counselor.

2. Satisfactory character and personality traits as well as proper attitudes and interests as determined by the high school principal, guidance director, or other school official acquainted with the student.

3. Health and physical vigor: Clarion University subscribes to and supports in letter and spirit Section 504 of the Rehabilitation Act of 1973 (Public Law 93-112), which prohibits discrimination on the basis of handicap. Therefore, the role of Admissions in application of this criterion is to be aware of the institutional obligation under Section 504 and to help the applicant understand that the university wishes to support his/her efforts to meet the requirements of a program he/she chooses. In instances in which a student has a handicap which would render success in a chosen field unlikely, the matter should be brought to the attention of the Director who will alert the appropriate dean so that reasonable counseling may be used. Specific questions related to this criterion should be referred to the Director.

4. Request the College Entrance Examination Board of the American College Testing Program to forward aptitude test scores to Clarion.

All liberal arts applicants and education applicants who intend to major in a foreign language must schedule an achievement test in the language, if that language has been studied in high school. The achievement tests are administered by the College Entrance Examination Board. Arrangements to take the tests may be made through the high school counselor.

TRANSFER POLICY AND ADMISSION WITH ADVANCED STANDING

Applicants transferring from other institutions will not be accepted without official transcripts of credit and certificates of honorable dismissal. A transfer student must have a minimum of one year's residence (30 semester hours of credit) at Clarion to qualify for a degree from Clarion.

Credit will be given for acceptable courses pursued in accredited collegiate institutions in which the student has made grades of A, B, or C. Where the grades are marked on a percentage basis, work graded five percent above the minimum passing grade will be accepted. Course grades transferred from other institutions do not affect the quality point average a student earns at Clarion. Quality points are not transferred.

Applicants who are not graduates of an approved four-year high school must have their credits evaluated by the State System of Higher Education, Harrisburg, Pennsylvania. Applicants who need this type of evaluation should consult the Registrar of the University.

Graduates of Pennsylvania community colleges with the Associate of Arts degree are accepted by the University as degrees transfer students with two full years of academic credit. Clarion generally does not accept more than two years of work or 64 credits from any two-year institution.

FOREIGN STUDENTS — ENGLISH COMPETENCY

Competency in the use of the English language sufficient to enable the student to read college-level texts, comprehend lectures, demonstrate writing skills commensurate with classroom requirements and participate in classroom discussion is an entrance requirement of Clarion University. Competency may be demonstrated with TOEFL scores.

ADMISSION OF FRESHMEN IN AUGUST, 1984

Applicants for admission to the freshman class in 1984 should read and observe carefully the following procedure:

1. Come in or send to the Admissions Office of the University for the forms necessary in making application for admission. There are two of these: (1) application and personnel record blank and (2) the report from secondary school officials.
2. Send the personnel record to the University along with an application fee of \$15.00 payable to the Commonwealth of Pennsylvania. This fee is not refundable. The secondary school record must be sent directly to the University by the principal or other school official. A medical form is to be completed after the applicant has been accepted.
3. A registration deposit of \$50.00 must be paid when the applicant receives notice of approval of his application for admission. This fee is not refundable but is credited toward the student's basic fee upon registration.
4. Clarion University applicants may ask for a decision as early as July 1 following their Junior year in high school. This would require the applicant to have taken the Scholastic Aptitude Test or the American College Test in the junior year.

WITHDRAWALS

All class withdrawals must be made through the Office of Academic Services. Classes from which a student withdraws during the first two weeks of a semester will not appear on his record. Withdrawals between the end of the second and ninth weeks may be made without penalty. After the beginning of the tenth week of a semester or the second half of a summer session, a course from which a student withdraws shall be finally reported with a grade of "E." Exceptions may be made for withdrawals due to extenuating circumstances such as illness or some other unavoidable occurrence.

If a student is on probation at the time of withdrawal from all classes and the withdrawal is after the twelfth week of the semester, he will not be permitted to return for the following semester unless the withdrawal is based on extenuating circumstances.

If a withdrawal is not made through the office of Academic Services, a failing grade will be recorded for the affected course(s).

Any student who withdraws from the university either during or at the end of a semester must notify the Office of Academic Services of his intention to withdraw and the reason for withdrawal. This is necessary for completion of the student's permanent record. Failure to comply with this regulation will constitute an unofficial withdrawal and may affect the student's chances of future readmission or his obtaining an honorable dismissal.

SCHOLARSHIP REQUIREMENTS

Student progress is normally reported once each semester. At the end of the first six weeks, each staff member submits to the Office of Academic Services a report of all freshman students doing unsatisfactory work in their classes. These reports are recorded and then passed on to the students.

GRADING SYSTEM

- A Excellent
- B Good
- C Satisfactory
- D Poor
- E Failure

Inc indicates incomplete work

W indicates withdrawal from a course

WX indicates withdrawal from college

Inc (incomplete) is not used unless a student has been in attendance through a semester or session. It indicates that the work of a student is incomplete and that the final grade is being withheld until the student fulfills all of the requirements of the course. It is used only when conditions and circumstances warrant and when evidence is presented to justify its being given.

All incomplete grades must be removed by the end of the following semester or they become failures.

Credit — No Record Courses. After a student has earned a minimum of 30 semester hours of credit and if he/she is in good academic standing, he/she may schedule a maximum of 6 courses or 18 semester hours for Credit — No Record. One such course may be taken each semester or summer session. This regulation does not apply to internships in the cooperative education program. All such internships are automatically Credit — No Record. Courses in one's major field may not be taken for Credit — No Record. The option for taking a course for Credit — No Record is limited to the first five weeks of each semester, and the first four days of any five week summer session. Satisfactory work in a Credit — No Record course shall be shown on the grade report as "CR," with no record and no credit for less than satisfactory work. Satisfactory work is defined as the equivalent of "C" grade or better under the letter grading system currently in use by the university. Should a student desire to have a Credit — No Record course changed from "CR" to a letter grade, he/she must retake the course. Credit — No Record courses are counted in determining the course load for a semester.

SCHOLARSHIP REQUIREMENTS

GENERAL POLICIES

Scholarship policy at Clarion University is formulated by the Subcommittee on Academic Standards, which is a sub-committee of the Faculty Senate.

Scholastic standing of students is determined on the basis of a quality point system in which a grade of "A" equals 4 quality points per semester hour; "B" equals 3; "C" equals 2; "D" equals 1; and "E" equals 0. The number of quality points earned in a single course for one semester is determined by multiplying the quality point value of the course grade by the number of semester hours in the course; thus, a grade of "A" in a three semester hour course has a quality point value of 12. A student's quality point average at any specific time is determined by dividing the total number of quality points earned in all courses by the total number of semester hours of credit attempted. For example, if a student earns a total of 30 quality points from 15 semester hours of course work in a single semester, his/her quality point average for the semester is 2.00.

At the end of each semester, a student's quality point average is calculated for that semester and also for all the course work he/she has taken up to and including the semester just completed. The latter is known as the cumulative quality point average.

Scholarship policy for *two year programs* requires that a student earn a minimum quality point average of 1.75 his/her first semester and a 2.00 his/her second semester and thereafter in order to be in satisfactory academic standing. His/her cumulative quality point average should be 2.00 by the end of the second semester.

In order to remain in the Medical Technology Program, students must maintain the following grade point average: first semester freshmen, 2.0; second semester freshmen and first semester sophomores, 2.5; thereafter 2.75 with a 2.75 in the natural sciences. Exceptions to these requirements must be approved by the Coordinator of Medical Technology.

Admission to the Medical Technology Program at the university does not guarantee admission to the year in the hospital laboratory. Hospital spaces are limited and admissions standards, which are under the control of the individual hospitals, are quite high.

Business Administration students entering Clarion in the summer or fall of 1982 and afterward in order to apply for and be accepted in the upper division of the business program must have completed not less than 50 semester hours of work with a minimum average of 2.00 and a minimum average of 2.00 in all 100 and 200 level courses in the business core. Upper division students in Business Administration must achieve a minimum average of 2.00 for all courses taken at the 300 level or above. To graduate with a degree in Business, a student must meet the standards just noted and also achieve a minimum grade of C in **each** course presented as part of the requirements for the major.

Teacher Education students entering Clarion in the summer or fall of 1982 and afterward, to become candidates for teaching certification must have completed at least 45 semester hours, including 6-9 semester hours of introductory courses in professional education, with a minimum average of 2.25 and must show basic skill competency in written expression, oral communication, and computation evidenced by a grade of C or above in English III, Speech Communication and Theater 113, and a Mathematics course above Mathematics 110. Admission to student teaching is contingent upon completion of at least 80 semester hours of college credit, a grade of C or above in all teaching methods courses, and a minimum average of 2.25 for all general education courses, for all professional education courses, and for all courses in fields of concentration with no semester hours of failure in required courses in general and professional education. To graduate with the B.S. in Education with certification, the student must earn a minimum grade of C in each student teaching experience, and have a minimum average of 2.25 in general education courses, in professional education courses, and in courses in any field of concentration.

Teacher Education students, in order to qualify for student teaching, must have a quality point average of at least 2.00 in all fields in which they are seeking certification and a cumulative quality point average of 2.00 for all their academic work. They must also have completed satisfactorily the general education requirement in English. Students having six or more semester hours of reported failure in a field of certification or in professional education courses shall not be assigned to student teaching.

GRADUATION REQUIREMENTS

A student must present a minimum cumulative quality point average (QPA) of 2.00 on a 4.00 scale except in Colleges where the stated QPA requirements are higher. Beginning with enrollments for the summer or fall of 1982, a student must also present a minimum QPA of 2.00 on a 4.00 scale in the major. Major courses are all those courses in Group II and III on the check sheet. All candidates for undergraduate degrees must have a minimum of 128 semester hours of credit (Music Education requires 130-131), and must have met the general education requirement in English in order to qualify for graduation.

For the Associate of Science degree, the student must have a cumulative quality point average of 2.00 on a 4.00 scale, and beginning with the summer or fall of 1982, a student must also present a minimum of 2.00 on a 4.00 scale in the major. All AS graduates must have a minimum of 62 semester hours of credit to qualify for graduation.

Students should study carefully requirements for individual programs presented in the section of this catalog detailing the program.

CLASS STANDINGS

Class standings (freshmen, sophomores, etc.) are determined by credits earned rather than by semesters of residence: Freshmen, 1-28 credits, Sophomores, 29-59 credits; Juniors, 60-89 credits; Seniors, 90+ credits.

GOOD ACADEMIC STANDING

To be in good academic standing at Clarion, undergraduate students must maintain a minimum quality point average of 2.00 for both semester and cumulative averages. Individual programs may have higher requirements.

SATISFACTORY PROGRESS TOWARD A DEGREE

In order to continue to receive any Title IV assistance, a full time student must be maintaining "satisfactory progress" (also referred to as "normal progress") in his or her course of study. Section 497(e) of the Higher Edu-

cation Act of 1965, as amended, requires an institution of postsecondary education to have standards of satisfactory progress. If an institution or school does not have any standards, it can neither commit or disburse any Title IV assistance to its students because it has no means of complying with the statute.

The requirement that a full time student be making satisfactory or normal progress should not be confused with the good academic standing requirement. A conceptual difference exists between the two. **Good academic standing means that a full time student is allowed by the institution to continue in enrollment. Satisfactory or normal academic progress means that the regular student is proceeding in a positive manner toward fulfilling degree or certificate requirements in his or her course of study.**

A full time student must be certified by the institution as making normal progress before receiving any additional Title IV assistance, including GSL checks. This certification must be completed prior to the beginning of each new payment period. Part-time students must satisfactorily complete 12 credit hours per year, including summer, to maintain eligibility.

Under the guidelines governing the PHEAA grant program a student must satisfactorily complete 24 new credit hours per year, including summer, to maintain eligibility; other grant programs require completion of 24 credit hours per year, including summer, to maintain eligibility.

ACADEMIC PROBATION

To be in good academic standing, undergraduate students must maintain a minimum quality point average of 2.00 for both semester and cumulative averages.

Students falling below the 2.00 standard in either the semester or cumulative average will be placed on academic probation effective the next semester of attendance.

Students on academic probation who achieve at least a 2.00 semester average are continued on probation if their cumulative average is less than 2.00. Students with a cumulative average less than 2.00 who fail to achieve at least a 2.00 semester average while on probation will be suspended, with one exception: **second semester freshmen who achieve at least a 1.75 semester average will not be suspended.**

ACADEMIC SUSPENSION

1. Most suspensions become effective at the end of the spring semester. The Academic Standards Subcommittee recognizes that sometimes extenuating circumstances, frequently beyond the student's control, contribute to poor academic performance. In these

situations, the Academic Standards Subcommittee acts as an appeals board to consider whether the circumstances merit rescinding the suspension. Students should not expect an appeal to automatically result in rescinding the suspension; each case is handled individually on its own merits.

2. Students notified of academic suspension have the following alternatives:

- a. The student may accept the suspension.
- b. The student may attend summer sessions at Clarion. If the student earns the required **cumulative** average by the end of the summer, the suspension will be rescinded **and the student will be continued on probationary status for the fall semester.**
- c. The student may appeal the suspension, **in writing**, to the Academic Standards Subcommittee if there is sufficient reason to warrant an appeal. Such petitions should be filed before January 5 for spring semester enrollment and August 15 for fall semester enrollment with the Office of Academic Services.

The format of the appeal should follow the guidelines given under **Readmission** below.

3. Students who are placed on probation or suspension are informed by letter, a copy of which is sent to the student's parents or guardian if the student is a dependent as defined elsewhere in this catalog.
4. Suspended students are permitted to take 6 credits at another accredited institution after consulting with their dean. Clarion permits transfer of these credits provided the credits are applicable to the student's program and a grade of C or better is earned. Clarion accepts credits and grades from accredited institutions, but quality points do not transfer.

READMISSION

The student appealing an academic suspension or applying for readmission after an academic suspension must apply in writing to the Office of Academic Services. Deadlines are August 15 to enroll for the fall semester and January 5 to enroll for the spring semester. Students readmitted following academic suspension are on probationary status for at least the semester of their readmission regardless of their academic performance during any interim summer periods.

Use the following guidelines when writing the petition. If possible, include independent documentation and/or references in the petition.

1. A statement indicating why the academic performance was so poor.

2. A statement indicating how the student expects to improve his/her academic performance and how he/she intends to correct the problem as stated in item 1.
3. If possible, a statement concerning the projected course of study, if a change of majors is planned.
4. If a student is returning to school after a suspension, he/she should indicate what he/she has been doing since he/she last attended Clarion.
5. Any other statements and supporting evidence thought helpful to the committee in deciding the petition.

MAXIMUM CREDIT HOUR LOAD

The normal credit hour load for undergraduate students in good academic standing is 15 to 18 credit hours per semester. Students on academic probation should not attempt more than 12 to 15 credit hours per semester.

Students wishing to register for 18 to 21 credit hours during any one semester must have a cumulative quality point average of 3.00 or better or the written permission of the appropriate college dean. Students are required to pay for each credit over 18.

All scholastic standards noted above are subject to change by the university.

HONORS

Academic honors are recognized with a semester Dean's List and with the traditional honors designations of Cum Laude, Magna Cum Laude, and Summa Cum Laude at graduation.

To be included on the semester Dean's List, the student must achieve a semester average of 3.50 or above on a 4.00 scale in which 4.00 represents a straight "A" average. Cum Laude honors are awarded for a cumulative quality point average of 3.4 to 3.6; Magna Cum Laude for 3.6 to 3.8; and Summa Cum Laude for 3.8 to 4.0. In order to earn graduation honors, a student must have earned at least 32 credits at Clarion.

There is also an Honors Colloquium, listed in the catalog course descriptions as Honors 300, for which students are selected by invitation by the Committee for Talented Students. Contact with the Committee may be made through the Academic Affairs Office or a College Dean's Office.

For information concerning honorary kinds of recognition that may be accorded by various colleges and departments, the student should inquire at the office of his/her major department and/or the office of the dean of the college in which he/she is enrolled.

UNDERGRADUATE DEGREE PROGRAMS

Clarion University offers combined academic and professional curricula leading to the undergraduate degrees of Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Music, Bachelor of Science, Bachelor of Science in Business Administration, Bachelor of Science in Communication, Bachelor of Science in Education, and Bachelor of Science in Speech Pathology and Audiology, as well as certification for teaching in the public elementary, middle, and secondary schools of the Commonwealth of Pennsylvania.

Additionally, it offers associate degree programs at its Venango Campus in Oil City. See Venango Campus, page 157.

COLLEGE OF ARTS AND SCIENCES

Anthropology (B.A.)	Medical Technology (B.S.)
Art (B.F.A.)	Music (B.M.)
Biology (B.A., B.S.)	Music Marketing (B.M.)
Chemistry (B.A., B.S.)	Natural Sciences (B.A.)
Chemistry/Business (B.S.)	Philosophy (B.A.)
Earth Science (B.A., B.S.)	Physics (B.A., B.S.)
Economics (B.A.)	Political Science (B.A.)
English (B.A.)	Psychology (B.A., B.S.)
French (B.A.)	Russian (B.A.)
General Studies (B.S.)	Social Sciences (B.A.)
Geography (B.A., B.S.)	Sociology (B.A.)
Geography/Planning	Sociology/Psychology (B.A.)
Technology (B.S.)	Spanish (B.A.)
German (B.A.)	Speech Communication (B.A.)
History (B.A.)	Speech Communication & Theater
Humanities (B.A.)	(B.A., B.S.)
Mathematics (B.A., B.S.)	Theater (B.F.A.)
Mathematics/Computer	
Science (B.S.)	
Mathematics/Actuarial Science	
(B.S.)	

COLLEGE OF BUSINESS ADMINISTRATION

All candidates for the Bachelor of Science or Associate Science degree in Business Administration are required to take a broad program of business foundation subjects and then choose a business field of specialization in one of the following majors:

Accountancy (BSBA)
Economics (BSBA)
Finance (BSBA)
Industrial Relations (BSBA)
Management (BSBA)
Management/Library Science
(BSBA)

Marketing (BSBA)
Office Management (BSBA)
Real Estate (BSBA)
Business Administration (AA)
(see Venango Campus)

COLLEGE OF COMMUNICATION

Communication (B.S.)
Computer Science (B.S.)

COLLEGE OF EDUCATION AND HUMAN SERVICES

Teacher Education

Early Childhood Education (B.S.Ed.) certification for grades N-3
Elementary Education (B.S.Ed.) certification for grades K-6
Library Science (B.S.Ed.) certification for grades K-12
Music Education (B.S.Ed.) certification for grades K-12
Special Education (B.S.Ed.) certification for grades K-12
Speech Pathology & Audiology (B.S.) certification for grades K-12
Secondary Education (B.S.Ed.) certification for grades 7-12
Biology French Physics
Chemistry General Science Russian
Communication Arts German Social Studies
Earth & Space Science Mathematics Spanish
English

Students may plan their programs to extend their certification to include Environmental Education. They may also choose the 17-hour coaching endorsement program in order to coach in Pennsylvania public schools.

Human Services

Habilitative Sciences (B.S.)
Habilitative Services (A.S.) — see Venango Campus
Speech and Hearing Sciences B.S. in Speech Pathology and
Audiology (5-year program leading to the M.S. degree)

COLLEGE OF LIBRARY SCIENCE

Library Science (B.S.Ed.)
Management/Library Science (BSBA)
Library Science/Liberal Arts (B.A.)

FINANCIAL INFORMATION

(Subject to Change Without Notice)

Summary of approximate costs per academic year (August to May) for undergraduate Pennsylvania residents. Semester charges are one-half the amounts shown. Commuting students pay the same cost except for room and meals. Costs of room and meals may vary for students living in privately-owned residence halls. (Graduate students should check the Graduate Office regarding fees.)

Basic Fee	\$1480*
Activity Fee	98
Room and Meals	1770
Health Center Fee	50
Student Community Building Fee	20
Est. Cost of Books and Supplies	<u>250</u>
TOTAL	\$3668

*For 12 to 18 semester hours credit.

I. ACTIVITY FEE

This fee, collected for all regularly enrolled students is administered through a student organization approved by the Council of Trustees. It covers the cost of athletic, social, musical, and recreational activities. Students carrying twelve semester hours or more **must** pay this fee. Students taking fewer than twelve semester hours may take advantage of the program by paying the fee. This fee is \$49.00 each semester. Student activity fee for summer sessions is \$1.00 per week (fees are subject to change). The activity fee must be paid prior to or at the time of registration.

A. Activity Fee refunds are governed by the following policy:

Refunds are not granted on an automatic basis. To be eligible for a refund a student must officially withdraw through the Office of Academic Affairs, and also submit in writing a request to the Student Association Office for a refund.

Upon request, a full refund of the activity fee will be granted to students who have been dismissed from the university for academic reasons.

Partial refunds will be granted to students who have made an official withdrawal from the university based upon a percentage of the paid activity fee according to the following schedule:

SEMESTER WITHDRAWAL

Before registration day	100% refund
1st and 2nd week	80% refund
3rd and 4th week	60% refund
5th and 6th week	40% refund
After 6th week	0% refund

- B. Student teachers and internship students practicing outside a 50-mile radius of Clarion as established by the map on file at the Clarion Student Association Office will be assessed one half of the activity fee per semester.
- C. Student teachers practicing within the 50 mile radius of Clarion will pay the full activity fee.
- D. Full time graduate students must pay a \$25.00 activity fee each semester. For full time graduate students commuting from outside a 50 mile radius of Clarion the fee is optional.

II. BASIC FEE

The basic fee is set by the Board of Governors of the State System of Higher Education. The amount shown was correct at the time this catalog was published, but like all fees, the basic fee is subject to change without notice. Checks in the required amount must be made payable to Clarion University of Pennsylvania.

- A. Basic fee for Pennsylvania residents for each semester amounts to \$740.00 (students taking 12 to 18 credits). Additional credits over 18 shall be at the rate of \$62.00 per credit. Part-time students taking eleven (11) or fewer semester hours of credit during a semester shall pay \$62.00 per credit.
- B. A student who does not have a Pennsylvania domicile is classified as a non-resident. Domicile is defined as the place where one intends to and does in fact permanently reside. The amounts for the activity fee, room and meal charges and costs of books and supplies are the same as for students who are Pennsylvania residents.

Determination of Pennsylvania domicile is made on the basis of documentary evidence, statements from disinterested persons, and the presumptions set forth below:

1. Continuous residence in Pennsylvania for a period of 12 months prior to initial registration creates a presumption of domicile.
2. A person attempting to establish domicile must have citizenship or proof of intention to become a citizen or must have been admitted to the United States on an Immigrant Visa.

3. A minor is presumed to have the domicile of parent(s) or a guardian.
4. A member of the Armed Forces who was domiciled in Pennsylvania immediately preceding entry into government service and who has continuously maintained Pennsylvania as a legal residence, will be presumed to have a Pennsylvania domicile.
5. A student receiving a scholarship or grant dependent upon domicile in a state other than Pennsylvania, is not domiciled in Pennsylvania.

Examples of factors which may provide convincing documentary evidence include purchase or lease of a permanent independent residence, payment of appropriate state and local taxes, transfer of bank accounts, stock, automobile, and other registered property to Pennsylvania, driver's license, agreement for permanent full time employment, membership in organizations, voter's registration, statement of intention to reside indefinitely in Pennsylvania, statement from parent(s) or guardian setting forth facts to establish a minor's financial independence and separate residence.

A student may challenge residency classification of filing a written petition with the Office of Student Accounts, Carrier Hall.

- C. Basic Fee for non-Pennsylvania residents for each semester amounts to \$1295.00 (students taking 12 to 18 credits). Additional credits over 18 shall be at the rate of \$108.00 per credit. Part-time students taking eleven (11) or fewer semester hours of credit during a semester shall pay \$108.00 per credit.

D. Summer School Fees

Both Pennsylvania and non-Pennsylvania residents pay \$62.00 per semester hour.

For meals and room the charge is adjusted on the basis of university costs and is estimated at \$250 per five-week session. Books and supplies are estimated at \$25.00 per five-week session.

III. ROOM FEE (Rates given are for university residence halls. Private residence hall charges may vary. University charges will be adjusted to reflect changes in the cost of food and utilities.)

- A. For meals, double occupancy of a furnished room, heat and light the charge will be \$885.00 for the semester. No reduction shall be allowed for absences from the university.
- B. A supplemental charge of \$100.00 shall be imposed in situations where students choose to occupy a regular double room on a single basis.

- C. Students are responsible for damages, breakage, loss or delayed return of university property. The charges shall be equal to the extent of the loss. Students are also collectively responsible for damages in common areas of residence halls.
- D. The rental contract for university residence halls shall be for the semester, mid-term graduates or student teachers excluded.

IV. FOOD SERVICE CHARGES

REGULAR

Plan A — 20 meals per week	\$385 per semester
Plan B — lunches only, M-F	175 per semester
Plan C — lunch & dinner, M-F	275 per semester
Summer rate — 20 meals per week	24 per week

TRANSIENT

\$1.70	Breakfast
\$2.35	Lunch or brunch
\$3.05	Dinner
\$4.75	Festive meals
\$6.10	Steak dinner

V. MISCELLANEOUS FEES

- A. Deposits. Residence Hall students are required to make a non-refundable deposit of \$50.00 to reserve a room for the fall semester. Payment must be by certified check or money order. Information concerning this deposit will be received from the Office of the Vice President for Student Affairs. Application for admission as either freshman or transfer student must be accompanied by a \$15.00 fee to cover the cost of processing, interviewing, and admission. The fee will not be credited to the student's account as a part of payment of basic, housing, or other fees. An additional fee of \$50.00 must be paid upon receipt of notice of approval of application. This \$50.00 fee is not refundable, but will be applied to the student's basic fee upon registration. Certified checks or money orders for these amounts must be made payable to Clarion University of Pennsylvania. Please do not mail cash.
- B. Drop-Add Fee. A fee of \$5.00 shall be charged for each course added to a student's schedule after the official registration day if it is added for the convenience of the student. This charge shall not be imposed when a course is added as the result of a change in the university course schedule or in such other circumstances as the President shall determine.

C. Late Fee.

1. Students, except off-campus cooperative or intern placements, who were regularly enrolled during a preregistration period, who failed to preregister, and who later registered for the next succeeding semester, shall be charged a late fee of \$25.00
2. Students who were not regularly enrolled during the immediately preceding preregistration period who did not complete their registration and/or pay their fees in full as of the established due date, shall be charged a late fee of \$25.00.

D. Transcript Fee. One copy of a transcript of credits earned at Clarion will be issued free of charge. A charge of \$3.00 is made for each subsequent transcript. Persons desiring to have their credits transferred to another institution should give the name and address of such institution. Transcripts will not be issued to anyone who has unpaid bills, library fines, or damage fees on his/her account.

E. Student Community Building Fee. This fee is mandated by State Law to retire the general obligation bonds for the Riemer Student Community Building. The fee is \$10.00 per semester for undergraduate students taking 10 or more credits. For part-time students, the fee is pro-rated as follows: 7-9 credits \$5.00, 1-6 credits \$2.50 per semester. A graduate student taking nine (9) or more credits is considered full-time and will be charged \$10.00. For summer sessions the fee per session: 1-4 credits \$1.00, over 4 credits \$2.00

F. Health Center Fees. The fee is \$25.00 per semester for all full-time students. Exempt from the fee are students who are assigned to an intern, student teaching or similar program outside a 50-mile radius of Clarion and who are not scheduled for any classes or student activities on the Clarion Campus. Reasonable charges for dispensed prescription medication and laboratory tests ordered by the Health Center will be billed directly to the student. Students have the privilege of employing their own physician at personal expense if they desire. If in the case of serious illness or injury, the university physician or nurse believes that transportation is necessary to the infirmary or to a local or home hospital, such transportation will be provided by ambulance, but the expense must be borne by the student.

A charge will be assessed to students who do not have a food contract at Chandler Dining Hall to cover the cost of meals while the student is in the infirmary. The charge will be at the transient meal rate.

G. Clinical Appraisal Fee. Effective July 1, 1982, a \$20.00 fee shall be charged for each clinical appraisal conducted by the Speech and Hearing Clinic.

H. Nursery School Fee. Enrollment charge is \$100.00 for each child per

semester; for part of a semester, \$1.50 per day for each day enrolled, with the total of such daily charges not to exceed \$100.00

- I. Placement Registration Fee. Effective July 1, 1982, a fee of \$10.00 shall be charged for placement registration.

VI. PRIVATE MUSIC INSTRUCTION FEES

Students who are enrolled in a curriculum in which private music lessons are required pay no extra fee for the required private music instruction in voice, piano, band, or orchestra instruments nor for use of pianos or other instruments for practice.

For other students, the charge for private music instruction in voice, piano, band, or orchestra instruments is \$100 per semester for one lesson per week (one credit hour). Rental of piano for practice for one period per day is \$20 per semester and rental of band or orchestra instruments is \$25 per semester.

VII. PAYMENT OF FEES

ALL FEES MUST BE PAID IN ADVANCE AND NO STUDENT AGAINST WHOM THERE ARE ANY UNPAID CHARGES SHALL BE ALLOWED TO ENROLL, GRADUATE, OR RECEIVE A TRANSCRIPT OF RECORD. THE CHECK FOR FEES SHOULD BE MADE PAYABLE TO THE CLARION UNIVERSITY OF PENNSYLVANIA.

When a check is presented covering fees, the student is responsible to see that funds are available when the check is presented for payment at the bank. If an uncollectible check is returned by the bank, the Business Office Return Check Recovery Section will notify the student that the check is uncollectible. The student will then be billed for the original amount plus a \$25.00 late registration fee, and a \$10.00 cost of handling fee for the uncollectible check. These charges must be paid by certified check or money order within 10 days. Failure to pay the charges will result in suspension from the university.

VIII. REFUNDS

Students may be eligible for a partial refund of the basic fee and room fee when they withdraw from the university. A student eligible for a refund must officially withdraw through the Office of Academic Services and also submit a written request for a refund to the Business Office.

For refund purposes, each "week" will be a university work week and will end on Friday at the close of university business hours. The first week will end on the first Friday following the start of classes.

The refund schedule will also apply to all part-time students reducing their credit hour load.

Except for a minimum forfeit of advanced deposits, refund for the room fee and basic fee will be based on the following schedule:

SEMESTER WITHDRAWAL

1st and 2nd Week	80% Refund
3rd Week	70% Refund
4th Week	60% Refund
5th Week	50% Refund
After 5th Week	No Refund

Students withdrawing from the start of the first class day of the semester will be entitled to consideration for a 100% refund. A student may be eligible for consideration for a meal ticket refund on a pro-rata basis after returning his/her meal ticket to the Business Office.

There will not be any refund for the late fee, the Student Community Building fee, Health Center fee, or Placement Registration fee.

FIVE-WEEK SUMMER SESSIONS

1st Week	60% Refund
2nd Week	40% Refund
After 2nd Week	No Refund

All basic fees, miscellaneous fees, room fees, meal charges, and activity fees are due and payable on a full semester basis upon registration. The university does not defer payment except in instances where financial aid has been approved prior to registration. Students who cannot pay all charges in full at registration should arrange a loan at their bank. A student whose educational expenses are being partially paid by a National Direct Student Loan, Basic Educational Opportunity Grant, or Pennsylvania Higher Education Assistance Agency Scholarship will be required to pay the balance of the charges due in order to complete registration and avoid the \$25.00 late registration fee. The university does not assume responsibility for charges by privately-owned residence halls or rooming facilities.

FEE CHARGES PER SEMESTER

Subject to Change Without Notice
(Does Not Include Activity Fee)

COMMUTING STUDENTS

Basic — 12 to 18 Credits	\$740.
Each additional credit over 18 —	\$62.00
Health Center Fee	25.
Student Comm. Bldg. Fee	10.
TOTAL	\$775.

RESIDENT STUDENTS*

Basic — 12 to 18 Credits	\$740.
Each additional credit over 18 — \$62.00	
Health Center Fee	25.
Student Comm. Bldg. Fee	10.
Room and meals	885.
TOTAL	\$1660.

MEAL STUDENTS ONLY

Basic — 12 to 18 Credits	\$740.
Each additional credit over 18 — \$62.00	
Health Center Fee	25.
Student Comm. Bldg. Fee	10.
Meals (Plan A)	385.
TOTAL	\$1160.

FINANCIAL AID SERVICES

Kenneth Grugel, Director

Financial assistance is available to students in the form of scholarships, grants, loans, and employment. Detailed information and necessary application forms may be secured from the Office of Financial Aid. Since the determination of eligibility is based on an analysis of a current Needs Analysis Application, students are encouraged to file a Pennsylvania State Grant/Federal Student Aid Application and designate Clarion University to receive a copy of that form. The Financial Aid Form of the College Scholarship Service may be used by out-of-state students who are required to use the FAF for their state grant programs.

SCHOLARSHIPS, GRANTS AND LOANS

PENNSYLVANIA AND FEDERAL GRANTS

PENNSYLVANIA HIGHER EDUCATION ASSISTANCE AGENCY GRANTS. The determination of recipients of these grants is made by the Agency. The grants vary in amount and are based on the financial need of Pennsylvania students. Application forms may be secured from the Agency or from high school guidance counselors.

*Private residence hall charges may vary.

PELL GRANTS. Federal grants available to undergraduate students. Recipients determined by the State System of Higher Education based on financial need.

SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANTS. Federal grants available to students with financial need as defined by the State System of Higher Education and are awarded by the Financial Aid Office at Clarion University of Pennsylvania.

CLARION UNIVERSITY SCHOLARSHIPS

ADMISSIONS

WALTER L. HART SCHOLARSHIPS. The Admissions Office awards five \$1,200.00 scholarships annually to incoming freshmen. Applicants must have applied and been accepted to the University for the upcoming academic year. Consideration will be given to those students ranked in the top 10% of their graduating class with SAT scores in excess of 1000, who have made outstanding accomplishments/significant contributions through involvement in extracurricular activities. Each award will be made in four \$300.00 increments over a four year period for a total of \$1,200.00. Interested students complying with the above criteria are encouraged to submit a letter of application along with three letters of recommendation before April 30 to: Director of Admissions, Clarion University of Pennsylvania, Clarion, PA 16214.

PRESIDENTIAL SCHOLARSHIPS. CUP will offer for the first time in the 1983-84 academic year five \$1,000.00 Presidential scholarships for new students (including transfers). Two of the scholarships will be reserved for minority students with outstanding academic records. Decisions will be made by the University President and the Director of Admissions. For additional information contact the Director of Admissions at the above address.

ALUMNI ASSOCIATION

CUP ALUMNI ASSOCIATION SCHOLARSHIPS. The CUP Alumni Association awards ten \$300.00 scholarships each year to CUP students. The scholarships, usually awarded to upperclassmen, are presented on the basis of need and scholarship. Applications are available during September and awards made in October. Two of the scholarships are reserved for the children of Clarion University of Pennsylvania graduates, however any student may apply for the other eight scholarships.

JAMES J. ARNER SCHOLARSHIP. A \$300.00 award is made available to a worthy student by the Arner family. The scholarship is administered

by the Alumni Association through its Board of Directors. For additional information on the Arner Scholarship or the Alumni Association Scholarships contact the Alumni Director, Alumni House, Wood Street, Clarion University of Pennsylvania, Clarion, PA 16214.

ARTS AND SCIENCES

ART

The Art Department awards scholarships in the BFA program in Studio Art. For further information contact Catherine Joslyn, Art Department Scholarship Committee, Clarion University of Pennsylvania, Clarion, PA 16214. The application deadline is February 1.

BIOLOGY

The Biology Department awards several scholarships to students already enrolled in one of their programs. The scholarships consist of a Foundation Scholarships, and a Biology Scholarship and Research Fund, both of which are given to Biology and/or Medical Technology students. The Kim Rutherford Memorial Scholarship is given to a freshman or sophomore Biology major. The number and amount of these scholarships vary. All awards are made in the spring semester of each year. For additional information contact: Biology Department Chair, Peirce Science Center, Clarion University of Pennsylvania, Clarion, PA 16214.

CHEMISTRY

WESTERN PENNSYLVANIA WATER COMPANY SCHOLARSHIP. A \$500.00 award is made to a Chemistry major with sophomore standing or higher.

HEAGY MEMORIAL SCHOLARSHIP. A \$200.00 award made to a Chemistry major with sophomore standing. For additional information on scholarships through the Chemistry Department, contact the Chemistry Department Chair, Peirce Science Center, Clarion University of Pennsylvania, Clarion, PA 16214.

PHYSICS

PAUL SHANK PHYSICS AWARD. This award is given to a student in the second or third year of the Physics program who has the most out-

standing academic record. A \$100.00 cash award is given along with the recipient's name inscribed on a permanent plaque in the Physics Department Office.

The Physics Department also determines the recipient of a \$300.00 CUP Foundation Scholarship based on scholastic achievement. For additional information on scholarships through the Physics Department contact the Physics Department Chair, Peirce Science Center, Clarion University of Pennsylvania, Clarion, PA 16214.

WILLIAM HART SCHOLARSHIP FUND. The William Hart Scholarship Fund was established by a bequest of the late Dr. Hart and his wife Elizabeth prior to his retirement from the CUP Faculty. Dr. Hart was a professor of chemistry from 1964 to 1974. The scholarship based on CUP expenses currently includes tuition, room, and board (not necessary for the awardee to live on campus), student community building fee, and the Keeling Health Center fee. The Foundation may also provide some additional money for other expenses. Applicants must major in biology, medical technology, chemistry, earth sciences, mathematics, or physics, must have completed at least three semesters of study (45 credit hours) at Clarion, and have a quality grade point average of 3.0 overall and 3.3 in science and mathematics course work. Additionally, the terms of the bequest specify that the candidate's ability in English be tested. This will be accomplished by means of a writing sample to be administered after the closing date for the applications. Interested students may obtain an application form from any of the following departmental offices or the members of the committee: Department of Biology, Professor J. Donachy; Department of Chemistry, Drs. O. Bower or G. Wollaston; Department of Geography, Earth Science, and Social Studies, Dr. T. Leavy; Department of Mathematics, Professor T. Wimer; Department of Physics, Dr. C. Keth. The application deadline is February.

CLARENCE E. AND JANET H. LESSER SCHOLARSHIP FUND. This fund was established by the will of Clarence E. Lesser. The trust provides scholarships to assist deserving students at Clarion University in amounts ranging up to the full basic fee. The annual awards may be renewed subject to the availability of funds at the discretion of the Selection Committee which supervises the scholarships. Talented candidates, both men and women, will receive preferential consideration for awards to be made in the following areas: Creative Writing (English), Music (String Instruments), Intercollegiate Athletics, and a fourth category to be selected by the committee each year. High school students who have exhibited high interest and achievement are urged to apply. Criteria for selection are talent, academic promise, and leadership potential. Applications are available from the Office of Financial Aid, Egbert Hall, Clarion University of Pennsylvania, Clarion, PA 16214. Completed applications should be sent to: Committee for the Lesser Scholarship Fund, Clarion University of Pennsylvania, Clarion, PA 16214. The deadline for receipt of applications and accompanying documents is April 15.

MUSIC

The Music Department offers a number of scholarships including a CUP Foundation Scholarship, Eagle Band Scholarships, and a Scholarship for String Students. For additional information contact: Music Department Chair, Marwick-Boyd Fine Arts Building, Clarion University, Clarion, PA 16214.

LAURA M. SMEDLEY SCHOLARSHIP

Scholarships may be granted to Venango County residents who are graduates of secondary schools serving Venango County residents. Students planning to attend the Associate of Science Nursing Program at the Venango Branch Campus of Clarion University are eligible for Smedley Scholarships. Scholarship grants are made on the basis of need.

Applications are available from: T. Audean Duespohl, Director, Division of Nursing, Clarion University of PA, Venango Campus, Oil City, PA 16301.

PRESIDENTIAL SCHOLARSHIPS

The President of Clarion University awards Presidential Scholarships each fall. These scholarships are awarded to students of exceptional talent in the colleges of Arts and Sciences, and Education and Human Services. Students are selected by the Deans of these two colleges and their names forwarded to the President. The number of scholarships and the amount may vary each year.

SPEECH COMMUNICATION AND THEATER

At present the Department of Speech Communication and Theater offers the following scholarships/awards of concern to freshmen/transfers: Daniel Preuhs Memorial Talent Scholarships in Acting. Two non-renewable scholarships of \$150.00 each will be awarded to incoming BFA/Acting majors who, in the opinion of the theater staff, demonstrate the greatest potential for success in theater. BFA/Theater or BA/SCT majors only should contact the Department directly for applications immediately upon being accepted by Clarion University. The Department will send an application form and inform the students of the dates of the Preuhs Scholarship auditions (sometime in May) at which time the faculty will award the two scholarships. For information contact: Chair, Department of Speech Communication and Theater, Clarion University of Pennsylvania, Clarion, PA 16214.

Daniel Preuhs Award for Musical Theater is a \$100.00 award made each year to the outstanding performer in the spring musical, who exemplifies a professional attitude and excellent grades. Open only to cast members of the spring musical. Applications are distributed by the director of the musical, and selection is made by a faculty/community jury.

Presidential Scholarships for Youth of Exceptional Talent are funded by the CUP Foundation. These annual awards are designed for freshmen of exceptional talent in the arts and athletics. The amount varies, but is usually \$500.00. Departments recommend outstanding incoming freshmen to the President who selects the recipients.

Elbert and Mary Moses Award is a \$50.00 award made to the outstanding SCT senior who intends to pursue graduate study. Faculty selects the recipient in May.

CUP Foundation Scholarship is a \$300.00 award made to a junior or senior who exhibits excellence in academic work and contribution to the department.

Alan Kroh/Alpha Psi Omega Scholarship is a \$100.00 award given for outstanding contributions to Clarion Theater.

ATHLETICS

The Athletic Department offers numerous scholarships including Waldo S. Tippin Scholarships, T. A. Carnahan Golf Award, and the Bruce Taylor Scholarship Fund for students who intend to compete in one of the outstanding intercollegiate teams at Clarion University. Interested students should have their high school coach contact the coach at Clarion for additional information.

BUSINESS ADMINISTRATION

Each of the five departments within the College of Business Administration: Accountancy, Finance, Marketing, Administrative Science, and Economics, offer a \$300.00 CUP Foundation Scholarship. Interested students should contact the Department Chair of their major.

Numerous other scholarships are available to Business students including:

CHARLES P. LEACH SCHOLARSHIP, a \$300.00 award made each year to upperclassmen based on scholarship, service to the University and the School of Business, and involvement in professional and political organizations. For additional information contact the College of Business Administration Dean, or one of the Department Chairs, Still Hall, Clarion University of Pennsylvania, Clarion, PA 16214.

PENNSYLVANIA INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS. A Scholarship up to \$500.00 a semester may be awarded to an accounting major. Decisions are based on scholarship, and a paper is usually required. Interested students should contact the Chair, Department of Accountancy, Still Hall, Clarion University of Pennsylvania, Clarion, PA 16214.

COMMUNICATION

DR. JAMES CANELOS COMMUNICATION SCHOLARSHIP. A \$750.00 scholarship will be awarded annually to an outstanding undergraduate communication major. Consideration will be given to those students with a minimum grade point average of 3.4, involvement in various activities, and demonstrated leadership abilities as well as a need for financial aid. Interested students should contact the College of Communication Dean, Becker Center, Clarion University of Pennsylvania, Clarion, PA 16214. In addition, the College of Communication offers a \$300.00 CUP Foundation Scholarship.

COMPUTER INFORMATION SCIENCE

E. ROSS DPMA SCHOLARSHIP. The Data Processing Management Association offers a \$50.00 scholarship to one of its members enrolled in the Computer Information Science Program at Clarion. The decision for the award is based on the student's academic record, contributions to DPMA, and to the department. Students interested in joining DPMA should contact: Mrs. E. Ross, Becker Hall, Clarion University of Pennsylvania, Clarion, PA 16214.

CUP FOUNDATION SCHOLARSHIPS

The Clarion University of Pennsylvania Foundation awards thirty-two \$300.00 departmental scholarships on both the Clarion and Venango Campuses. The recipients are selected on the basis of scholarship and service to the department. Interested students should contact the chair of their major department.

LIBRARY SCIENCE

The following are scholarships, assistantships, and other forms of financial aid that are available for students enrolled in the college of

Library Science: Clarion University of Pennsylvania Foundation Scholarship, a \$350.00 award for undergraduate students. Graduate Assistantships — 14 quarter time assistantships which waive the student's tuition and provide for a stipend of \$1352.50 per academic year. For additional information on any of these scholarships contact the College of Library Science Dean, Carlson Building, Clarion University of Pennsylvania, Clarion, PA 16214.

RECOGNITION SCHOLARSHIPS

Clarion University of Pennsylvania offers numerous recognition scholarships through various departments:

Max Nemmer Scholarship is administered through the English Department; Thornton Scholarship is administered through the Department of APPS; Dr. James Gemmell Scholarship is administered through the Office of Student Affairs.

ROTC

The Army Reserve Officer's Training Corps (ROTC) offers two, three, and four year scholarships to students enrolled in the ROTC program at Clarion. Army ROTC Scholarships pay for university tuition, textbooks, activity fees, laboratory fees, and other purely academic expenses plus a \$100.00 a month subsistence allowance paid to the student. Applicants compete nationally with other ROTC students. Should a scholarship be granted, the student is required to take a minimum of one semester of a foreign language and incurs a four-year active duty military obligation as a commissioned officer.

SPECIAL EDUCATION

GINNY THORNBURG RECOGNITION SCHOLARSHIP. A \$300.00 award is made to the outstanding special education junior or senior on the basis of scholarship, citizenship, contributions to organizations, and service to exceptional individuals. Contact The Chair, Special Education Department, Clarion University of Pennsylvania, Clarion, PA 16214.

SPEECH PATHOLOGY AND AUDIOLOGY

This fund, established by a memorial to Marian Renn Marshall, is designed to provide emergency financial aid to students enrolled in SPA for the facilitation of special projects. Specific information concerning

the requirements for obtaining assistance may be secured from the Coordinator of Speech Pathology and Audiology, Clarion University of Pennsylvania, Clarion, PA 16214.

Additional scholarship opportunities are currently becoming available to students at Clarion. For additional information, contact the Chair of the Department of your academic interest.

LOANS

NATIONAL DIRECT STUDENT LOAN PROGRAM. This program provides for loans to students who have a demonstrated need for financial assistance and who are in good academic standing.

To be eligible for consideration for a loan, a student must complete an application form, have a current Needs Analysis Form on file in the Office of Financial Aid, be a citizen of the United States or have declared his/her intention to obtain citizenship, and be enrolled or accepted for enrollment as a student.

These loans, which are non-interest bearing while a student is enrolled, are available to a maximum of \$3,000 for the first two years with a limit of \$6,000 for the bachelor's degree. Repayment of the loan may extend over a ten-year period beginning six months after withdrawal or graduation from Clarion. Repayments are to be made on a quarterly basis with interest accruing at the rate of five percent per year.

In specified teaching situations, as much as fifteen percent of the loan may be canceled for each year of teaching. The borrower's obligation to repay the loan is canceled in the event of death or permanent and total disability.

GUARANTEED STUDENT LOAN PROGRAM. Loans to a maximum of \$2,500 per academic year to a limit of \$12,500 in five years for students in good academic standing are generally available from local banks and savings and loan associations. Guaranteed Student Loans are based on financial need for families with an income exceeding \$30,000 per year. Application forms and detailed information may be secured from the financial institution from which a loan will be requested. A 9% rate of interest deferred until graduation or withdrawal.

PLUS LOAN FOR UNDERGRADUATE STUDENTS — AUXILIARY LOAN TO ASSIST STUDENTS. Loans available to parents of CUP students or independent students up to \$3,000 in an academic year. Not based on financial need but may not exceed the cost of instruction and other forms of assistance. Repayment begins sixty days after receiving the loan and has a 12% rate of interest. Applications are available at participating lending institutions.

CLARION UNIVERSITY OF PENNSYLVANIA FOUNDATION REVOLVING LOAN FUND — EMERGENCY LOAN. The Foundation has

established an emergency loan fund for educational purposes only, which is available to full-time students in good standing. Loans may be granted to maximum of \$200. The loans are interest-free for 3 months. Thereafter a \$10.00 late fee is imposed. Loans are due and payable prior to graduation or withdrawal from Clarion. Application forms may be secured from the Foundation Office.

ALEXANDER HREACHMACK REVOLVING LOAN FUND — EMERGENCY LOAN. Similar in purpose and administration to the Foundation Loan, Hreachmack Loans have a maximum value of \$100, are interest-free for sixty days, and have a \$25.00 late fee. Loans are due and payable prior to graduation or the end of each semester. Applications are available in the Office of Financial Aid.

EMPLOYMENT

Employment on a part-time basis is available to the extent that funds are provided by the Federal government and the Commonwealth of Pennsylvania. The assignment of students to part-time campus positions is generally based on financial need; however, it should be recognized that such employment will not be sufficient to meet the total expenses of attending Clarion.

FEDERAL WORK-STUDY PROGRAM. The university participates in the Federal Work-Study Program which permits eligible students to work a maximum of 10 hours per week while classes are in session. A limited number of positions are available under this program for full-time employment during vacation periods. Eligibility requirements for employment include United States citizenship, demonstrated financial need as determined by a current Needs Analysis Form, and satisfactory academic standing.

STATE EMPLOYMENT PROGRAM. A limited number of part-time positions are available under this program to students with satisfactory academic standing and some financial need. Most student positions are limited to 10 hours of employment per week. A current Needs Analysis Form is required.

CONDITIONS WHICH ACCOMPANY FINANCIAL AID

In order to continue receiving financial aid following initial enrollment at Clarion University of Pennsylvania, students must meet certain conditions each year. They must be enrolled for at least half-time and must reapply for aid each year using the appropriate application forms as mentioned above. Students may receive assistance from most financial aid programs for up to four years, but renewal requires that they maintain

"normal academic progress." This means that they must successfully complete a minimum of 24 semester hours by the end of each academic year, including the summer, before they can be granted assistance for their next school year.

Part-time students must successfully complete a minimum of 12 semester hours during each academic year, including the summer, to continue receiving any financial assistance.

For financial aid purposes a student becomes a sophomore with 24 credits, a junior with 48, and a senior with 72. These credit levels for class standing apply to financial aid only and not to other academic considerations. Students should understand that completing 24 semester hours per year will not qualify them for graduation in four years.

APPEAL PROCEDURE

A student denied financial aid for any reason may appeal the denial as follows:

1. Write to the Office of Financial Aid, Clarion University of Pennsylvania, Clarion, PA 16214, noting the denial and stating the reasons why financial aid should not be denied. Example: A student may be denied aid because it appears he/she has fewer than 24 new credits for the year. Perhaps during the summer at another institution the student has earned for transfer to Clarion credits which will fulfill the normal progress requirement but about which the university has not been informed. The student may present the appeal in person at the Office of Financial Aid in Egbert Hall instead of writing.
2. The Office of Financial Aid will review the denial in terms of information provided by the student.
3. Following the review the Office of Financial aid will report back to the student concerning the appeal.

UNIVERSITY CURRICULA

All undergraduate curricula, with the exception of the two-year Associate of Science curriculum in Nursing and Associate of Arts in Business Administration, lead to a bachelor's degree and have a common area of 48 semester hours in general education. Each student should select his general education program carefully in consultation with his faculty advisor.

GENERAL EDUCATION DISTRIBUTION

The general education course distribution listed on these pages is, with minor exceptions, applicable to all students in all programs.

The minimum credit hour requirement in general education is 48 semester hours distributed, in most programs, as follows:

- I. Modes of Communication (minimum) 12 s.h.
English Composition¹ 3-6 s.h.
Courses to be selected from two of the following:
 Computer Science, Elementary Foreign Language²,
 Logic, Mathematics³, Speech Communication⁴ 6-9 s.h.
- II. Natural Sciences and Mathematics (minimum) 9 s.h.
Courses to be chosen from at least two of the following fields:
 Biology, Chemistry, Earth Science, Mathematics³,
 Physical Science, Physics
- III. Social Sciences (minimum) 9 s.h.
Courses to be selected from at least two of the following fields:
 Anthropology, Economics, Geography, History, Political
 Science, Psychology, Sociology
- IV. Humanities⁵ (minimum) 9 s.h.
Courses to be selected from at least two of the following fields:
 Art, English, Intermediate Foreign Language, Literature,
 Music, Philosophy, Speech Communication, Theater
- V. Personal Development and Life Skills (minimum) 9 s.h.
Health 2 s.h.
Physical Education Activity Courses 2 s.h.
(Maximum of 2 credits in physical education activity courses
may be counted toward graduation.)
Courses chosen from General Studies or other disciplinary areas
or approved student activities for credit (minimum) 5 s.h.

¹One or two of the following: Eng. 110, 111, 200, 201, 202, 203, 204, 206; Comm. 101, 200, 250, but only students required to do so may take Eng. 110.

²May not be used to meet foreign language requirement for the B.A. degree.

³Credit cannot be granted for Math. 100 if it is taken after successful completion of, or concurrently with, any other course in mathematics.

⁴Selection is limited to the following courses: SCT 113, 114, 115, 154, 251, 256, 257, 258, 264.

⁵Eng. 110, 111, 201, 206, 253 and SCT 113 may not be used to meet the humanities requirement.

COLLEGE OF ARTS AND SCIENCES

Gregg F. Lacy, Ph.D., Dean

Office: 204 Founders Hall

Telephone: 226-2225

The College of Arts and Sciences offers a wide variety of programs in the arts, the humanities, the social and behavioral sciences, the natural sciences, and mathematics.

In the arts, the College offers:

- the B.F.A. degree with majors in art and theatre;
- the B.M. degree with majors in music and music marketing;
- the B.A. degree with a major in speech and theatre;
- the B.S. in speech communication and theatre.

In the humanities, the following programs are available:

- the B.A. degree with majors in English, French, German, philosophy, Russian, Spanish, and speech as well as a general major in the humanities.

In the social and behavioral sciences, students may select:

- the B.A. degree with majors in anthropology, economics, geography, history, political science, psychology, sociology, and sociology/psychology as well as a general major in the social sciences;
- The B.S. degree with majors in geography, planning, technology, and psychology.

In the natural sciences, options include:

- the B.A. degree with majors in biology, chemistry, earth science and physics as well as a general major in the natural sciences;
- the B.S. degree with majors in biology, chemistry, chemistry/business, earth science, medical technology, and physics.

In mathematics, the College of Arts and Sciences provides several programs:

- the B.A. degree with a major in mathematics;
- the B.S. degree with majors in applied mathematics, mathematics/computer science, mathematics/actuarial science.

In addition, the College of Arts and Sciences offers pre-professional advisement programs in the fields of business (pre-MBA), engineering, law, medicine, dentistry, pharmacy, and theology. The College also has a cooperative engineering program with the School of Engineering at the University of Pittsburgh, and Case-Western Reserve University of Cleveland.

The College of Arts and Sciences cooperates with the College of Library Science and the College of Education and Human Services to provide certification programs in library science and in secondary education which may be earned concurrently with a B.A. or B.S. degree.

Finally, the College offers an interdepartmental Language and Area Studies Program.

The specific requirements of each of these programs are listed in the pages that follow. Additional information may be obtained from the chairman or other individual in charge. All B.A. Programs require second year proficiency in a foreign language. Students who have been graduated from a high school (or equivalent) where the language of instruction is not English will be exempted from any foreign language requirement at Clarion. They will not receive academic credit for knowledge of their own native language.

DEPARTMENT OF ANTHROPOLOGY, PHILOSOPHY, POLITICAL SCIENCE, AND SOCIOLOGY

Robert A. Rath, Ph.D., Chair

Professors: Konitzky, Takei, Tu; *Associate Professors:* Bertsch, Girvan, Graybill, Rath, Somers, Straffin, VanBruggen, Zallys

ANTHROPOLOGY, B.A. 51 credits

Required: Anth 211, 213, 312, and 21 additional credits in anthropology chosen in consultation with a departmental advisor. In addition to 30 credits in anthropology, the following courses are required: Hist. 111, 112, 120, PS 210, 211, Psy. 211 and Soc. 211.

PHILOSOPHY, B.A. 42 credits

Required: Phil. 111, 112, 255, 256, and 15 credits of philosophy electives chosen in consultation with a departmental advisor, with Phil. 352 and 353 recommended. In addition to these 27 credits of philosophy, 15 credits from among the following fields are required: art, English, foreign language, music, speech, and theater.

POLITICAL SCIENCE, B.A. 51 credits

Required: P.S. 210, 211, 353, 365, or 366 and 18 credits of political science electives. In addition to these 30 credits in political science, the following courses are required: Econ. 211, 212; Soc. 211, 300; and 9 credits from history, anthropology, or psychology.

SOCIOLOGY, B.A. 57 credits

Required: Soc. 211, 300 and 351, and 21 additional credits in sociology chosen in consultation with a departmental advisor. In addition, the following courses are required: Psy. 211, 230, P.S. 210, Econ. 211, Soc.

Work 311 plus 12 credits chosen from among anthropology, computer science, history, economics, philosophy, political science, psychology, and social work.

DEPARTMENT OF ART

Eugene A. Seelye, M.A., Chair

Professors: Baptist, Hobbs; Associate Professors: Charley, Edwards. P-Jobb, Grosch, Seelye; Assistant Professors: Dugan, Joslyn

ADMISSION TO THE B.F.A. PROGRAM IN ART

Admission to the B.F.A. program may be unconditional or conditional. Unconditional admission applies to students admitted on the basis of portfolio review. Students without a portfolio are admitted conditionally; after a year of study their status is changed to unconditional if their progress has been satisfactory.

Students wishing to be considered for admission to the B.F.A. program in Art should send the chairman of the department a letter including name and address, name of high school, information about art experiences and interests, and any other information relevant to admission to the program. When applying for unconditional admission, students should provide a portfolio. Photographs are acceptable. A personal interview is recommended but not required. Questions regarding the program should also be directed to the chairman.

ART, B.F.A. 72 credits

Required: Art 121, 222, 125, 126; 12 credits in art history; 15 credits in art foundation courses; 18 credits in an art concentration; 15 credits in art electives; and the Senior Show.

DEPARTMENT OF BIOLOGY

Kenneth R. Mechling, Ph.D., Chair

Professors: Aharrah, Dalby, N. Donachy, Harmon, Kodrich, Mechling, J. R. Moore, Morrow, Twiest, J. Williams; Associate Professor: J. Donachy, Assistant Professors: Belzer, Cook, Jetkiewicz, McPherson

BIOLOGY, B.A. 53 credits

Required: Biol. 153, 154, 201, 202, 203 and 12 credits from approved biology electives. In addition to these 29 credits in biology, the following courses are required: Math 171; Chem. 153, 163, 154, 164, 254, 264; Phy. 251 and 252. Chem. 453/463 and Geog. 254 are acceptable electives.

BIOLOGY, B.S.

64 credits

Required: Biol. 153, 154, 201, 202, 203, and 12 credits from approved biology electives. In addition to these 29 credits in biology, the following courses are required: Math 171; Chem. 153, 163, 154, 164, 254, 264; Phy. 251, 252; also 11 credits from the following fields: biology, chemistry, computer science, mathematics, physics. In some instances the student may be advised to substitute Chem. 151, 161, 152, 162, and Chem. 251, 252 for Chem. 153, 163, 154, 164, and Chem. 254 and 264. This is particularly true if the student plans to take additional chemistry beyond the minimum requirements. Chem. 453, 463 and Geog. 254 are acceptable electives.

The Biology Department also offers a program in secondary education; see pages 123-4.

MEDICAL TECHNOLOGY, B.S.

78 credits

The Medical Technology program includes an academic preparation of three years (96 semester hours including general education) at Clarion and a twelve-month course of clinical study in a hospital-based school of Medical Technology accredited by the Committee on Allied Health Education and Accreditation (32 semester hours). Upon successful completion of two years of prescribed courses at Clarion, the student is eligible to apply for admission to the hospital school. Although application is made through the office of the Coordinator of Medical Technology at Clarion, acceptance is at the discretion of the staff of the clinical school. Clinical school spaces are limited, standards for admission are high, and admission to the Medical Technology Program at Clarion does not guarantee admission to the clinical school year. Clarion University maintains affiliations with seven clinical schools, and students may apply to accredited, non-affiliated schools, also. After graduation from Clarion University the student is eligible to take any of several licensing examinations. Successful completion of the exam permits practice of the profession in all states in the United States. Further information on the exams can be obtained from the Coordinator of Medical Technology.

The following courses are required during the three years at Clarion: Biol. 153, 154, 201, 341, 444; Chem. 153, 163, 154, 164, 254, 264, 351, 361; either Biol. 203 or Chem. 453; Phy. 251, 252; and a math course by advisement. Substitutions for the above courses must be approved in writing by the Coordinator of Medical Technology. Students in the program must maintain the following grade point averages: first semester freshmen, 2.0; second semester freshmen and first semester sophomores, 2.5; thereafter 2.75 with a 2.75 in the natural sciences. Exceptions to these requirements must be approved by the Coordinator of Medical Technology. Specific information about courses, standards, and requirements established by the affiliate hospital schools are provided to enrolled students by the Coordinator of Medi-

cal Technology. Students wishing to transfer into the program must be approved by the Coordinator of Medical Technology and must plan to spend two years on the Clarion campus. Hospital affiliates are The Altoona Hospital, Altoona, Pa; The Benedum School of Medical Technology, Western Pennsylvania Hospital, Pittsburgh, Pa; Conemaugh Valley Memorial Hospital, Johnstown, Pa.; Divine Providence Hospital, Williamsport, Pa.; Harrisburg Hospital, Harrisburg, Pa.; Saint Vincent Health Center, Erie, Pa.; Williamsport General Hospital, Williamsport, Pa.

DEPARTMENT OF CHEMISTRY

Paul E. Beck, Ph.D., Chair

Professors: Beck, Bower, Brent, Krugh, J. Laswick, P. Laswick, McElhattan, Sharpe; *Associate Professor:* Wollaston

CHEMISTRY, B.A. 65 credits

Required: Chem. 151, 161, 152, 162, 251, 261, 252, 257, 262, 270, 352, 354, 355, 356, 357, 456, 461, and 470. In addition to these 41 credits of chemistry, the following courses are required: Math. 171, 172, 271, 272; Phy. 251 or 258, and 252 or 259.

Graduates who have met these requirements and one advanced chemistry course will be certified as having completed an approved program as determined by the Committee on Professional Training of the American Chemical Society. Chemistry majors planning to attend graduate school should elect advanced inorganic, organic, or physical chemistry. German is the recommended foreign language.

CHEMISTRY, B.S. 77 credits

Required: Chem. 151, 161, 152, 162, 251, 261, 252, 257, 262, 270, 352, 354, 355, 356, 357, 456, 461, and 470. In addition to these 41 credits of chemistry, the following courses are required: Math 171, 172, 271, 272; Phy. 251 or 258, and 252 or 259 plus 12 credits of approved science/math electives.

Graduates who have met these requirements and one advanced chemistry course will be certified as having completed an approved program as determined by the Committee on Professional Training of the American Chemical Society. Chemistry majors planning to attend graduate school should elect advanced inorganic, organic, or physical chemistry.

CHEMISTRY major with BUSINESS minor, B.S. 77 credits

Required: Chem. 151, 161, 152, 251, 261, 252, 257, 262, 270, and 7

credits of chemistry electives numbered 300 or above; Actg 251; Mktg 360; Mgmt. 320; CIS 206; Econ. 221; Math 221 or Math 456; and 9 credits chosen from Actg. 252, 250, 253; Fin. 370, 471; Mktg. 361, 460, 461, 465, 321, 420, 421, 424, 425; Econ. 310, 351, 340, 361.

The Chemistry Department also offers a program in secondary education; see pages 124-5.

FIVE-YEAR CURRICULAR SEQUENCE LEADING TO A B.S. IN CHEMISTRY AND THE MASTER OF BUSINESS ADMINISTRATION

The Department of Chemistry of the College of Arts and Sciences and the College of Business Administration offer a five-year curricular sequence leading to a B.S. in Chemistry and the M.B.A. degree. Students electing this sequence must meet the entrance requirements of the graduate business program. The undergraduate portion of the program has the following components.

B.S. In Chemistry

I. General Education	48 credits
II. Requirements in the Major	80 credits
1. Required courses in Chemistry (44 credits)	
2. Required supplemental courses (24 credits)	
3. Additional required courses (12 credits)	
III. Free electives — Business courses	12 credits
TOTAL	140 credits

An undergraduate student in this Chemistry MBA curricular sequence is required to show competency or course equivalents in:

1. Finite mathematics, statistical processes, and quantitative methods
2. Economic theory
3. Financial and managerial accounting
4. Financial management
5. Marketing, distribution, and production
6. Management organization, policy, human behavior, and interpersonal communication
7. Legal and social environment
8. Information systems

These competencies can be met by the normal course sequence of a chemistry major with proper advisement with certain specialized courses being taken as free electives. The graduate portion of the program has the following components:

Master of Business Administration

ACTG	552:	Management Accounting	3 credits
ECON	510:	Managerial Economics	3 credits
FIN	675:	Advanced Financial Management	3 credits
MGMT	521:	Organization Structure & Behavior	3 credits
BSAD	690:	Business Policy	3 credits
MGMT	626:	Production Management	3 credits
MKTG	560:	Marketing Decision Making	3 credits
ECON	603:	Quantitative Analysis	3 credits
Electives approved by graduate advisor			9 credits
Total			33 credits

COOPERATIVE ENGINEERING PROGRAM

Albert R. Exton, Ph.D., Coordinator

Committee members: *Professors:* Exton, Beck, Gendler

Clarion University and the School of Engineering at the University of Pittsburgh jointly operate a cooperative engineering program by which a student may earn a B.S. degree in physics, chemistry, or mathematics from Clarion and an engineering degree from the University of Pittsburgh in a five-year period. Students spend three years at Clarion and, if they have a cumulative grade-point average of 2.5, are virtually guaranteed admission to the School of Engineering at the University of Pittsburgh, though not necessarily into any particular department, for the final two years.

EARTH SCIENCE

EARTH SCIENCE, B.A. and B.S. See Department of Geography and Earth Science.

ECONOMICS

Instruction for this program is provided by the Department of Economics in the College of Business, but the program is administered in the office of the dean of Arts and Sciences.

ECONOMICS, B.A. 51 credits

Required: Econ. 211, 212, and 24 credits chosen in consultation with a departmental advisor. In addition to these 30 credits in economics, the following are required: three courses in history selected from 111, 112, 113, 120, and 121; P.S. 210, 211; Anth., Psy., or Soc. 211, and one additional course in anthropology, psychology, or sociology.

ENGINEERING

See Cooperative Engineering Program, page 74, and Pre-professional Studies in Engineering, page 83.

DEPARTMENT OF ENGLISH

Francis G. Greco, Ph.D., Chair

Professors: Barber, Dennis, Greco, Grejda, Knickerbocker, Park, Shumaker; *Associate Professors:* Caesar, Newman, Reinhardt, Sheraw, Wilson; *Assistant Professors:* Karl, Osterholm, Rocklin; *Instructors:* Campbell, Jeschke, MacBeth

ENGLISH, B.A.

54 credits

Required: Eng. 221, 222; two of 230, 320, 322, 385; one of 252, 253, 457, 458; one of 303, 305, 307, 345, 401, 412, 413; one of 311, 332, 333, 441; one other course in English literature; and 18 credits of English chosen in consultation with a departmental advisor. In addition to these 42 credits in English, 12 credits representing each of the following fields are required: art, music, philosophy, and speech communication and theater.

The English Department also offers a program in secondary education; see pages 127-8.



DEPARTMENT OF GEOGRAPHY & EARTH SCIENCE

George S. Shirey, Ph.D., Chair

Professors: Leavy, G. Shirey, D. Totten; *Associate Professor:* Kordecki

EARTH SCIENCE, B.A. 49 credits

Required: E.S. 150, 200, 250, 255, 280, 385; Geog. 125, 225; and 6 credits from approved earth science/geography electives. In addition to these 30 credits of earth science/geography, the following are required: Math 171, 232, and 12 credits from the following fields: biology, chemistry, mathematics, and physics.

EARTH SCIENCE, B.S. 45 credits

Required: E.S. 150, 200, 250, 255, 270, 280, 385; Geog. 100, 125, 225, 400. In addition to these 33 credits of earth science/geography, 12 credits from among the following courses are required: Biol. 153, 154; Chem. 153, 154, 163, 164; Math 171, 172, 221; and Phy. 251, 252.

EARTH SCIENCE (Geology Track), B.S. 64 credits

Required: E.S. 150, 250, 255, 260, 270, 350, 355, 360, 370, 375; Geog. 225, 400; nine additional hours must be elected from the following — E.S. 275*, 300, Geog. 125, 350, 450; Biol. 111; Chem. 351 or Field Camp.** In addition to these 45 credits, the following courses are required: Chem. 153, 154; Phy. 251, 252; Math 232.

GEOGRAPHY, B.A. 57 credits

Required: E.S. 111, Geog. 100, 125, 250, 257, 260, 275, and 9 credits from among the following: Geog. 115, 255, 300 and 450. In addition to these 30 credits of geography, the following courses are required: Econ. 211, 212; Hist. 111, 112, 213; P.S. 210, 211; Anth., Psy., or Soc. 211 and one additional course in anthropology, psychology, or sociology.

GEOGRAPHY, B.S. 42 credits

Required: E.S. 111; Geog. 100, 125, 225, 260, 325, 400, 450, and 6 additional credits in geography. In addition to these 30 credits in geography, 12 credits from the following fields are required: anthropology, economics, history, political science, psychology, sociology, computer science, and mathematics with Comp. Sci. 101, 102 and Math 221 recommended.

The Geography and Earth Science Department also offers a program in secondary education; see page 126.

*Projected for future development.

**In cooperation with another college or university.

FRENCH

FRENCH, B.A., See Department of Modern Languages and Cultures.

GERMAN

GERMAN, B.A. See Department of Modern Languages and Cultures.

DEPARTMENT OF HISTORY

Imogene Sumner, M.A., Chair

Professors: Day, Duffy, Khan, Swecker, S. VanMeter; *Associate Professor:* Sumner; *Assistant Professors:* Abate, Crawford; *Instructor:* Dunn

HISTORY, B.A. 36 credits

Required: U.S. History — 6 credits; European History — 6 credits; History of other geographical areas — 6 credits; and 9 credits of history electives. In addition to those 27 credits of history, 9 credits of cognates to be chosen from the field of Arts and Sciences or in the Department of Economics.

HUMANITIES

This interdisciplinary program is administered in the office of the dean.

HUMANITIES, AREA MAJOR, B.A. 54 credits

Required: 54 credits from among the following fields: art, English (not including 110 or 111), foreign language (beyond the first year), music, philosophy, speech communication and theater. Each of the fields must be represented by at least one course and a sufficient number of courses at the 300 or 400 levels must be elected to promote a scholarly interest in at least one field.

LANGUAGE AND AREA STUDIES PROGRAM

This program is jointly offered by the departments of Modern Languages and Cultures, Economics, History, and A.P.P.S. It is not a degree program but a combination of courses leading to a notation on the student's official record concomitant with a major in any one of the participating departments. The requirements are as follows: proficiency in a foreign language at the second-year level; 24 credits (not including first and second year language) in the following departments with each department represented: Modern Languages and Cultures, Economics, Geography, History, A.P.P.S.

LIBRARY SCIENCE

The liberal arts curriculum at Clarion University does not include a program in library science but liberal arts students, regardless of their major may, by taking four courses in library science. L.S. 257, 258, 260, 357, qualify as provisional librarians under the Pennsylvania Public Library Code. Additional credits may be elected in consultation with the Dean of the College of Library Science.

DEPARTMENT OF MATHEMATICS

Benjamin M. Freed, Ph.D., Chair

Professors: Bezak, Cronin, Gendler, Mitchell, Ossesia, Singh; *Associate Professors:* Freed, Henry, Kopas, Lowe, Rhoads, Ringland, Wimer; *Assistant Professors:* Engle, Linnan, Northey, Pagano; *Instructor:* Klingler

MATHEMATICS, B.A. 40 credits
Required: Math. 270, 271, 272, 451, 452, 471, 472, and 16 credits of math electives in courses numbered 300 or above.

MATHEMATICS (Applied Mathematics Option), B.S. 46 credits
Required: Math 270, 271, 272, and 28 credits in math electives from courses numbered 300 and above. In addition to these 40 credits of mathematics, two second-level courses containing applications of mathematics from a list approved by the Mathematics Department are required. Proficiency in computer programming must also be demonstrated, either by course work or by examination.

MATHEMATICS (Computer Science Emphasis Option), B.S. 58 credits
Required: Math 270, 271, 272, 451, 452, 360, 370 and 16 credits in math electives. In addition to these 40 credits of mathematics the following courses are required: C.S. 163, 164, 240, 253, 254, and one computer science elective.

MATHEMATICS (Actuarial Science Option), B.S. 58 credits
Required: Math 270, 271, 272, 360, 370, 455, 456, 350, and 13 credits in math electives. In addition to these 40 credits in mathematics, the following courses are required: Econ. 211, 212; ACTG. 151, 152, FIN. 373, and an elective in insurance. Proficiency in computer programming must also be demonstrated, either by course work or by examination.

A program in secondary education with a major in Mathematics is described on page 130.

DEPARTMENT OF MODERN LANGUAGES AND CULTURES

Brigitte Callay, Ph.D., Chair

Associate Professors: Callay, Fortis, Garcia, Hegewald, Nikoulin;
Assistant Professors: Diaz, Kluesener

FRENCH, B.A. 42 credits
Required: Fr. 251, 252, 255, 256, 351, and 15 additional credits from courses numbered above 252. In addition to these 30 credits of French, Eng. 252; and 9 additional credits in French, geography, and history, and/or Eng. 457 and 458, and/or other courses by advisement are required.

GERMAN, B.A. 42 credits
Required: Ger. 251, 252, 255, 256, 351, and 15 additional credits from courses numbered above 252. In addition to these 30 credits of German, Eng. 252 and 9 additional credits in German, geography and history and/or Eng. 457 and 458, and/or other courses by advisement are required.

RUSSIAN, B.A. 42 credits
Required: Russ. 251, 252, 255, 256, 351, and 16 additional credits from courses numbered above 252. In addition to these 34 credits of Russian, English 252 and 5 additional credits in Russian and/or geography, history, English are required.

SPANISH, B.A. 42 credits
Required: Span. 251, 252, 255, 256, 351, and 15 additional credits from courses numbered above 252. In addition to these 30 credits of Spanish, Eng. 252 and 9 additional credits in Iberian and/or Latin American geography and history, and/or Eng. 457 and 458 and/or other courses by advisement are required.

The Department of Modern Languages and Cultures also offers several programs in secondary education; see pages 128, 130, 132, 133.

See statement on International Education-Study Abroad, page 36.

DEPARTMENT OF MUSIC

Dr. J. Rex Mitchell, D.Mu.Ed., Chair

Professors: Farnham, Michalski, Mitchell; *Associate Professors:* Berberian, Black, Bohlen, Hall, Urrico; *Assistant Professors:* Lassowsky, Lazich, McLean, Wells; *Instructors:* Amrod, Hughes

MUSIC, B.M. Performance 69-71 credits
Required: 32 credits of applied music, Mus. 135, 136, 235, 236, 151, 152, 251, 252, 365 or 366, techniques and/or pedagogy, music literature and senior recital requirements as applicable to each performance area, and secondary piano and voice requirements. In addition, participation in a performing organization is required for a minimum of eight semesters.

MUSIC, B.M. Music Marketing 70-71 credits
Required: Mus. 135, 136, 235, 236, 151, 152, 251, 252, 365 or 366, 367, 7 credits of applied music (8 without optional internship) 5 credits from Mus. 280-286, secondary piano and voice requirements, participation in a performing organization is required each semester the student is on campus. Actg. 151, Mgmt. 320, Econ. 211 and 212, Mktg. 360, 362, 363, 460 or 468. Internship optional.

ATTENDANCE AT RECITALS

Students pursuing degree programs are required to attend the bi-weekly student recital series for seven to eight semesters as an extension of their curricular and performance activities.

JUNIOR/SENIOR RECITAL

Students who wish to perform a junior or senior recital must audition in the spring semester preceding the academic year in which the recital is to be scheduled.

PIANO COMPETENCY TEST

The Piano Competency Test is required of all B.M. Performance (except piano or organ majors) and all Music Marketing majors in order to qualify either for senior recital or an internship, depending on the major. Students are expected to complete the requirements and take the Competency Test by the end of their sophomore year.

NATURAL SCIENCES

An interdisciplinary program.

NATURAL SCIENCES, B.A. 59-61 credits
Required: Math 171, 172, 271; Phys. 251 or 258 and 268, Phys. 252 or 259 and 269; Chem. 151, 161, 152, 162; Biol. 153, 154; E.S. 252, 258. In addition to these 44-46 credits, the student must take 5 courses totaling not less than 15 credits; 3 of these courses must be in one science (excluding mathematics) and the other two in a different science or in mathematics. All five must be from approved electives.

PHILOSOPHY

PHILOSOPHY, B.A. See Department of Anthropology, Philosophy, Political Science, and Sociology.

DEPARTMENT OF PHYSICS

William H. Snedegar, Ph.D., Chair

Professors: Exton, Keth, McGowan, Snedegar; *Associate Professors:* Blaine, Rhode, Shofestall

PHYSICS, B.A. 61 credits
Required: Phy. 258, 268, 259, 269, 351, 352, 353, 354, 370, 461, and 4 courses from the following: Phy. 355, 356, 357, 453, 455, and 460. In addition to these courses in physics, the following are required: Math. 171, 172, 217, 272, 350; Chem. 153 and 163.

PHYSICS, B.S. 70 credits
Required: Phy. 258, 268, 259, 269, 351, 352, 353, 354, 370, 461, and 4 courses from the following: Phy. 355, 356, 357, 453, 455, and 460. In addition to these courses in physics, the following are required: Math. 171, 172, 271, 272, 350; Chem. 153, 163, and 3 other courses in the natural sciences and mathematics not including physics.

The Physics Department also offers a program in secondary education. See page 131.

POLITICAL SCIENCE

POLITICAL SCIENCE, B.A. See Department of Anthropology, Philosophy, Political Science, and Sociology.

PRE-LAW STUDIES

No particular course of study is required in preparation for law school. The pre-law student may major in any of the degree programs listed above, but certain fields of study are recommended in any case; these are: English, political science, English and American constitutional history, philosophy, speech, accounting, corporate organization. In particular the following courses are recommended: P.S. 211, 354; Hist. 357; SCT 256, 311; Bus. Ad. 151. Interested students should contact the pre-law advisor for additional information.

PRE-MASTER'S OF BUSINESS ADMINISTRATION OPTION

The College of Arts and Sciences in cooperation with the College of Business Administration has prepared a program at the baccalaureate level which provides the basic courses needed for further graduate train-

ing for business careers. Undergraduate students intending to complete the pre-MBA option will meet the university's general education and special College of Business Administration requirements, will complete an Arts and Sciences major of choice, and will be advised to enroll in specific business administration and related core courses. Completion of the suggested undergraduate program, however, provides neither certification, nor a minor in business administration, nor a guarantee of admission to any graduate business program. The courses provide the student with a background suitable for study at the graduate level.

The student, through consultation with the pre-MBA advisor, will take first lower division skills and general knowledge courses. These courses should help students assess their ability and interest in business subjects and may also provide background preparation for assistantships during their graduate study. The courses, or approved equivalents, include:

Econ.	211:	Principles of Economics I
Econ.	212:	Principles of Economics II
CIS	200:	Computer Information Processing
Math.	221:	Statistics with Applications
Math.	232:	Math for Business and Economics I
		or
Math.	172:	Calculus with Analytic Geometry I
Actg.	251:	Financial Accounting
Actg.	252:	Managerial Accounting
BSAD	240:	Legal Environment I

The student will gain admission to the upper division business courses by (1) maintaining at least a 2.75 QPA both in business courses and overall; (2) earning at least 60 credits, or junior standing; and (3) planning to register for the GMAT during the junior year, taking the examination during the first semester of the senior year. The upper division courses suggested are:

Mgmt:	320:	Principles of Management
Mktg.	360:	Principles of Marketing
Fin.	370:	Financial Management
Mgmt.	425:	Production Management

The Arts and Sciences pre-MBA student may not take more than 30 undergraduate credits in the College of Business Administration at Clarion unless formally admitted to Clarion's MBA program. Changes in the requirements for admission to the upper division courses, as well as in the list of suggested appropriate courses, may be made upon approval of both the Colleges of Arts and Sciences and Business Administration. Students should consult their pre-MBA advisor before registration each term.

PRE-PROFESSIONAL STUDIES IN ENGINEERING

Since curricular requirements vary among engineering schools and fields of specialization, students planning to transfer to a school of engineering must give careful consideration to the requirements of the institutions to which they intend to apply and, with the exception of those in the Cooperative Engineering Program, q.v., should plan to transfer no later than at the completion of their sophomore year. The following courses should be included in their programs at Clarion: Math 171, 172, 271, 272, 350, 471; Chem. 153, 154, 163, 174; Phy. 258/268 and 259/269. Interested students should contact Dr. Exton of the Physics Department.

PRE-PROFESSIONAL STUDIES IN MEDICINE, DENTISTRY, AND RELATED FIELDS

The Pre-Professional Committee has the responsibility to advise students seeking admission to schools of medicine, osteopathic medicine, dentistry, veterinary medicine, optometry, podiatry, and chiropractic. The University does not have a pre-professional program or major. Each student must choose to enroll in an academic area and will have an advisor in an academic department. The committee functions to advise students only on the pre-professional aspects of their program. Recommended courses are: Biol. 153 and one other, excluding botany; Chem. 151, 161, 152, 162 or Chem. 153, 163, 154, 164; Chem. 251, 261, 252, 262; Phy. 251, 252; Math 171, 172; and Eng. 111. Requirements will vary with professional schools. Interested students should contact a member of the Pre-Professional Committee (Dr. Beck, Chairman) for additional information and guidance.

PRE-PROFESSIONAL STUDIES IN PHARMACY

It is possible for a student to transfer to a school of pharmacy after the completion of either the freshman or sophomore year. In either case, he should carefully check the requirements of the school he wishes to enter. If the student plans two years of pre-pharmacy study at Clarion, he should include the following courses in his program: Biol. 153, 154; Chem. 153, 154, 163, 164, 251, 252; Math. 171, 172; Phy. 251 and 252. Interested students should contact the pre-pharmacy advisor, Dr. Beck, for additional information and assistance.

PRE-THEOLOGICAL STUDIES

There is no fixed pattern of pre-seminary studies but the American Association of Theological Schools recommends that students who are

planning to enter a seminary should major in English, philosophy, or history. Interested students should contact the pre-theology advisor, Dr. Takei.

DEPARTMENT OF PSYCHOLOGY

Susan Williams, Ph.D., Chair

Professors: Bernard, Combs, McCauley, Thornton, S. Williams; *Associate Professors:* Nachtwey, Semon; *Assistant Professors:* Nicholls, Potter

PSYCHOLOGY, B.A.

54 credits

Required: Psy. 211, 230, 251, 470, and at least 18 credits in psychology electives chosen in consultation with a departmental advisor. Three elective courses at the 400 level, in addition to Psy. 470, are required. At least one course must be taken from the following: Psy. 454, 457, 460, 464, or 499; and at least one from the following: Psy. 452, 455, 458, 459, or 465. In addition to the 30 credits in psychology, students are required to select 24 credits representing at least three of the following fields: anthropology, biology, computer science, history, mathematics, philosophy, physical science, political science, sociology, special education, speech pathology and audiology. Note: Psy. 322 may not be counted toward a major in psychology, and only two of Psy. 260, 321, and 311 may be included in the 18 elective credits. In addition to the above, students are required to pass the final examination in their 252 numbered language course.

PSYCHOLOGY, B.S.

54 credits

Required: Psy. 211, 230, 251, 470, and at least 18 credits in psychology electives chosen in consultation with a departmental advisor. Three elective courses at the 400 level, in addition to Psy. 470, are required. At least one course must be taken from the following: Psy. 454, 457, 460, 464, or 499; and at least one from the following: Psy. 452, 455, 458, 459, or 465. In addition to the 30 credits in psychology, students are required to select 24 credits representing at least three of the following fields: anthropology, biology, computer science, history, mathematics, philosophy, physical science, political science, sociology, special education, speech pathology and audiology. Note: Psy. 322 may not be counted toward a major in psychology, and only two of Psy. 260, 321, and 311 may be included in the 18 elective credits. In addition to the above, students must complete two computer courses, one mathematics course (Math. 115 or above), and either Phil. 111 or 112.

RUSSIAN

RUSSIAN, B.A. See Department of Modern Languages and Cultures.

SOCIAL SCIENCES

An interdisciplinary program.

SOCIAL SCIENCES, B.A. 54 credits

Required: 15 credits in one of the following disciplines: anthropology, economics, geography, history, political science, psychology, and sociology, 9 credits in one other, and 6 credits in each of the remaining. At least 12 credit hours must represent junior and/or senior level work.

SOCIOLOGY — PSYCHOLOGY

Robert Rath, Ph.D., Coordinator

Committee members: *Associate Professors:* Rath, Semon

An interdisciplinary program.

SOCIOLOGY-PSYCHOLOGY, B.A. 54 credits

Required: Soc. 211, one of 351, 361, or 362, one of 352, 363, or 370 and three courses of sociology electives; Psy. 211, 230, 251 and three courses of approved psychology electives. In addition to these 36 credits in sociology and psychology, 18 credits must be selected representing at least two of the following fields: anthropology, economics, geography, political science.

SPANISH

SPANISH, B.A. See Department of Modern Languages and Cultures.

DEPARTMENT OF SPEECH COMMUNICATION AND THEATER

Bob H. Copeland, Ph.D., Chair

Professors: Copeland, Hardwick, Hufford, A. Weiss, Wright (P.T.); *Associate Professors:* Clark, Marlin; *Instructors:* Elmes, Hartley, McCauliff, Nees

SPEECH COMMUNICATION, B.A. 36 credits
Required: 36 credits selected from the following courses: SCT 115, 155, 200, 210, 213, 214, 215, 251, 256, 257, 264, 300, 310, 311, 312, 333, 358, 375, 400, 411, 415, 490 and 495.

SPEECH COMMUNICATION AND THEATER, B.A. 36 credits
Required: 12 credits from among the following: SCT 115, 155, 200, 210, 213, 214, 215, 251, 256, 257, 264, 300, 310, 311, 312, 333, 358, 375, 400, 411, 415 and 490; 12 credits from the following: SCT 120, 155, 161, 201, 215, 251, 253, 254, 255, 262, 301, 350, 351, 352, 355, 359, 361, 362, 363, 364, 365, 366, 367, 401, 461 and 490; 12 credits among any of the SCT courses above and 495.

SPEECH COMMUNICATION AND THEATER, B.S. 57 credits

(1) Concentration in Interpersonal Communication: Required: 15 credits from among SCT 200, 214, 264, 300, 312, 358, 400 and 415; a theater elective and 18 credits selected from other SCT courses; 6 credits from Math 115, 171, 211; Econ 221, 222; CIS 200, 151, 152, 223, 224, 253; and 6 additional credits from Math, Econ, CIS courses previously listed, or from among Psy 230, 251, 455 or Phil 111, 112; and 9 credits by advisement in anthropology, business, communication, English, history, philosophy, political science, psychology or sociology.

(2) Concentration in Rhetoric and Public Address: Required: 15 credits from among SCT 115, 210, 213, 214, 215 (Rhetoric of Presidential Campaigns), 256, 310, 311, 312 and 415; a theater elective, and 18 credits selected from other SCT courses; 6 credits selected from Math 115, 171, 221; Econ 221, 222; CIS 151, 152, 200, 223, 224, 253; and 6 additional credits from the Math, Econ, CIS courses previously listed, or from among Psy 230, 251, 455 or Phil 111, 112; and 9 credits by advisement in anthropology, business, communication, English, history, philosophy, political science, psychology or sociology.

THEATER, B.F.A. 53 credits

(1) Concentration in Acting: Required: SCT 155, 201, 251, 253, 254, 255, 301, 359, 361, 363, 365, 366, 461, Mus 162, 163 and 12 credits from among SCT 113, 120, 161, 200, 264, 350, 351, 352, 355, 362, 400; Eng 172, 343, 345, 412, 413; and Mus 172. Also required are an audition, four non-credit production labs, a recital, and periodic workshops.

(2) Concentration in Technical Design/Direction 48 credits
Required: SCT 120, 161, 253, 262, 352, 359, 362, 363, 364, 367, Art 236, 237 and 12 credits from among SCT 155, 254, 350, 351, 495; Eng 172, 343, 345, 412; Art 112, 113, 114, 238, 239; Comm 152, 251;

and Mus 131. Also required are a portfolio, four non-credit labs, a design project and periodic workshops.

- (3) Selection/Retention Standard for BFA/Theater majors: Students must demonstrate potential for excellence in acting or technical design by means of an audition and/or a portfolio of designs, and audition for acceptance into the degree no later than the end of their second semester in the program.

After completing a total of 60 credit hours, or prior to entering their junior year, B.F.A. students must appear before the theatre staff and demonstrate the following: a minimum q.p.a. of 2.50 in at least 12 credits within the required core curriculum and a written statement of career goals. At the time of this review, the theatre staff will inform the B.F.A./Theater student of any program deficiencies and specify a time limit for removing the deficiencies. If the student fails to meet the retention standard, he/she will be dropped from the B.F.A./Theater program. Students may appeal the decision of the theater staff through the appropriate channels: Department Chair, Dean, and Vice President for Academic Affairs.

TEACHER CERTIFICATION

Liberal Arts students can gain teacher certification in secondary education by taking required education courses as free electives in a B.A. or B.S. program. Details are available in the office of the Dean of the College of Arts and Sciences.

BACHELOR OF SCIENCE IN GENERAL STUDIES

Administered by the College of Arts and Sciences, the B.S. in General Studies is a separate program designed to provide for those students who have not decided upon a specific school or major and may, therefore, benefit from enrolling in a structured program through which they can explore a number of disciplines. The program is also for students who wish to develop a highly individualized program and follow it through to graduation because their interests are not accommodated by the established curricula and majors. However, it should be understood that it is not necessary or expected that students should continue in General Studies to graduation. Rather, it is anticipated that many who come to the university within the purview of this program will develop increasingly focused interests that will encourage them to transfer into an area where they can pursue a specific major.

General Requirements

Admission requirements for the B.S. in General Studies are the same as those for admission to the university.

The degree is based upon the standard eight-semester sequence of courses and requires a minimum of 128 semester hours of credit for graduation.

A candidate for the B.S. in General Studies may not declare a major field. Students who decide upon a major field may not remain in the program but must transfer to the college and department offering a program encompassing the major.

Students may transfer from other areas into the General Studies program, but those who wish to transfer in must have at least two semesters of full time study remaining prior to graduation.

Academic standards for good standing in the program are the same as the university standards for good standing.

To earn the B.S. in General Studies the student must have a minimum cumulative quality point average of 2.00 for all course work.

Specific Requirements

General education as required by the university	48 s.h.
Maximum course work in a single discipline (in addition to general education above	39 s.h.
Arts and Sciences courses in addition to general education	51 s.h.
Upper division courses, normally 300 level or above	39 s.h.
All courses selected in consultation with an advisor.	



COLLEGE OF BUSINESS ADMINISTRATION

Dr. Robert A. Fleck, Jr., Ph.D., Dean

Office: Still Hall

Telephone extension: 2600

PHILOSOPHY AND OBJECTIVES

The College of Business Administration offers the curricula leading to the degree of Bachelor of Science in Business Administration, the Master of Business Administration and the Associate of Arts in Business Administration. The description below is concerned mainly with the undergraduate curriculum. For full information concerning the MBA program, refer to *The Graduate School* bulletin and the *Master of Business Administration* bulletin, which may be obtained from the College of Business Administration, Clarion University, Clarion, PA 16214. The description of the Associate of Science program is found on page 157.

The curriculum leading to the degree of Bachelor of Science in Business Administration is designed to assist students in arriving at a better understanding of the complex relationships inherent in the rapidly changing domestic and international world of business, industry, and government; to provide educational experiences that will help students develop their potential for leadership and service; to help stimulate the growth of students as individuals and citizens; and to provide a qualitative environment in which educational enrichment can take place.

Supplemented by broad general requirements in the humanities, the social sciences, and the natural sciences, the business curriculum offers a well balanced program of courses in business administration and economics which will not only help to prepare students for careers in business, industry, and government, but will also give preparatory training to students who plan to further their education through graduate study in business, economics, or law.

Although there is opportunity to develop depth in certain areas, i.e., accountancy, economics, finance, industrial relations, management, management/library science, marketing, office management, and real estate, emphasis in the program is not on deep specialization but rather on the development of analytical ability, intellectual toughness, imagination, the ability to communicate ideas, and adaptability so that technological change does not render the education obsolete.

ACADEMIC STANDARDS

1. Math requirements. All students in the College of Business Administration are required to take MATH 131 and 232 or their equivalents.

Advanced courses beyond MATH 131 and 232 will be accepted in lieu of this requirement.

2. Separation of upper- and lower-division programs of study. All business students will be required to apply for admission to the upper-division course of study in the College of Business Administration. The upper division will consist of all courses numbered 300 and above. No student shall be permitted to take any 300- or 400-level course in the College of Business Administration until the student has applied and been accepted to the upper division. In order to apply and be accepted to the upper division in the College of Business Administration each student shall:

- a. Have completed MATH 131 and 232 or their equivalents;
- b. Have completed all required courses in the business core with a 100- or 200-level designation;
- c. Have completed not less than 50 hours with a minimum average of 2.00/4.00. In addition each student shall have a minimum average of 2.00/4.00 in all 100-level and 200-level course in the business core.

3. Upper-division courses are considered those courses numbered 300 or above. Each student shall have a minimum average of 2.00/4.00 in all the 300-level or above courses in the business core. In order to graduate a student must meet university requirements, the above standards, and achieve a minimum grade of C in each course presented as meeting the requirements for the major. The semester hour credits required for the degree of Bachelor of Science in Business Administration are summarized as follows:

General Education:	54 credits
Business Foundation subjects:	36 credits
Business and Economics Electives (Majors):	24 credits
Free Electives:	<u>14 credits</u>
Total required for graduation	128 credits

4. All business majors at Clarion are required to take at least six (6) credits in courses with international content. These credits are to be utilized to satisfy requirements in either the major, or free electives. At least three of these should be business credits, and will be applied to the major. Courses taken to satisfy this requirement must be selected from the approved international course list.

GENERAL EDUCATION REQUIREMENT

The general education program required for all students in the university is presented on page 67, however, students majoring in Business

Administration must include six credits in mathematics (at least Math 131, 232, or their equivalents) in fulfilling general education or free elective requirements. They must also add six credits in economics (ECON 211 and 212). The general education requirements are summarized as follows:

Modes of Communication	12 credits
Natural Sciences & Mathematics	9 credits
Social Sciences	9 credits
Humanities	9 credits
Personal Development & Life Skills	9 credits
(includes Health and Physical Education)	
Additional General Education (Economics)	<u>6 credits</u>
Total	54 credits

BUSINESS FOUNDATION REQUIREMENTS

Regardless of the major chosen, all students of Business Administration must take 36 hours of **Foundation Subjects**. These have been selected with the following primary objectives in mind:

1. To give students an insight into the major functions of organizations whether they be private business firms, or local, state or federal government agencies.
2. To give students an understanding of the major problems within organizations as they pursue their goals.
3. To assist students in using the insights and methods of the humanities, social sciences, and natural sciences to analyze and illuminate these problems. Each of the Foundation Subjects either deals with an important aspect of organization or provides a tool which can be used in attacking problems faced by individuals in organizations. The courses as a whole comprise a common body of knowledge in business and administration.
4. To provide students with an understanding of the domestic and world-wide environment of business.

The following foundation courses are required of all business administration students:

ACCOUNTING AND QUANTITATIVE

CIS	110:	Computer Info. Processing	3 credits
ACTG	251:	Financial Accounting	3 credits
ACTG	252:	Managerial Accounting	3 credits
ECON	221:	Bus. & Econ. Statistics I	3 credits
ECON	222:	Bus. & Econ. Statistics II	3 credits

ENVIRONMENTAL

BSAD	240:	Legal Environment I	3 credits
ECON	310:	Microeconomic Theory	3 credits

NOTE: Econ. 211 and 212 are prerequisites to Econ. 310.

FUNCTIONS

MGMT	320:	Principles of Management	3 credits
MKTG	360:	Principles of Marketing	3 credits
FIN	370:	Financial Management	3 credits
MGMT	425:	Production Management	3 credits

ADMINISTRATIVE PROCESS

BSAD	490:	Adm. Decision Making	3 credits
Total			36 credits

MAJOR REQUIREMENTS

In addition to the general education and business foundation courses outlined above, all student studying business administration must build up a major consisting of at least eighteen hours in one of the following areas:

Accountancy	Management
Economics	Management/Library Science
Finance	Marketing
Industrial Relations	Office Management
	Real Estate

Twenty four hours of business and economics electives are required for each major. Of these twenty-four hours, at least eighteen are specified for the major, and three hours must be an approved business or economics course with an international emphasis. Any unspecified hours in the major may be satisfied by any business or economics course not used to meet other requirements. Specific course requirements for each of these majors are outlined under the five academic departments on the following pages.

DEPARTMENT OF ACCOUNTANCY

Charles J. Pineno, Ph.D., Chair

Office: Still Hall

Professors: Dupree, Hong; *Associate Professors:* Campbell, Pineno;

Assistant Professors: Barnes, Otte; *Instructors:* Dawson, Nugent, M. Pae, Zirkle; *Part-Time Instructors:* Merz, Puskar

ACCOUNTING (BSBA)

The following courses are required:

ACTG	350:	Intermediate Accounting	3 credits
ACTG	351:	Accounting for Equities	3 credits
ACTG	352:	Cost Accounting	3 credits
ACTG	353:	Federal Taxes	3 credits
ACTG	354:	Auditing	3 credits
ACTG	355:	Advanced Accounting	3 credits

One course from the following:

ACTG	451:	Accounting Problems
ACTG	452:	Advanced Cost Accounting
ACTG	453:	Problems in Federal Taxation Accounting
ACTG	455:	Not-For-Profit Entities
*ACTG	490:	Current Accounting Pronouncements and Practice
ACTG	499:	Tax Topics

*Prerequisite: Co-Op 420: Accounting Internship offered during the spring semester of the senior year for 9 credits.

One international business course from the following:

MGMT	426:	International Business
ECON	312:	Comparative Economic Systems
ECON	361:	International Economic Relations

ACCOUNTING (BSBA/MBA)

PROFESSIONAL ACCOUNTANCY COURSE OF STUDY

The Professional accountancy program leads to both the Bachelor of Science in Business Administration and the Master of Business Administration degrees. The sequence of 161 semester hours of course work is designed to prepare persons for entry into the practice of professional accountancy as prescribed by the American Institute of Certified Public Accountants.

FRESHMAN YEAR

- | | |
|----------------------|---------------------|
| 1. General Education | 2. General Business |
|----------------------|---------------------|

SOPHOMORE YEAR

- | | |
|----------------------|---------------------|
| 1. General Education | 2. General Business |
|----------------------|---------------------|

JUNIOR YEAR

- | | |
|---|--------------------------|
| 1. General Business | 3. General Education |
| 2. Professional Accounting | 4. Advisement and Review |
| Admission to Professional Accountancy Course of Study | |

SENIOR YEAR

- | | |
|--|---|
| 1. Approval for Continuation
in Course of Study | 6. Advisement and Review |
| 2. General Business | 7. Graduation |
| 3. Professional Accountancy | a. Optional exit with Bachelor
of Science Degree |
| 4. General Education | b. Bachelor of Science |
| 5. Admission to Graduate School | Continue in course of study |

GRADUATE YEAR

- | | |
|--|---|
| 1. Approval for Continuation
in Course of Study | 3. Professional Accountancy |
| 2. General MBA Courses | 4. Graduate with Master of
Business Administration |

Required courses, prerequisites, electives, and recommended sequence for a professional accountancy course of study are listed below. Courses marked with asterisks (*) should be selected to meet presently allowed electives in either the undergraduate or graduate program. Courses with 500 or 600 numbers are graduate level courses only. Courses with 400 numbers may be graduate or undergraduate credit (graduate credit must have prior approval).

Required Business Courses:

ACTG	251:	Financial Accounting	3 credits
ACTG	252:	Managerial Accounting (prereq. ACTG 251)	3 credits
ACTG	350:	Intermediate Accounting (prereq. ACTG 252)	3 credits
ACTG	351:	Accounting for Equities (prereq. ACTG 350)	3 credits
ACTG	352:	Cost Accounting (prereq. ACTG 252)	3 credits
ACTG	353:	Federal Taxes (prereq. ACTG 251)	3 credits
ACTG	354:	Auditing (prereq. ACTG 351)	3 credits
ACTG	355:	Advanced Accounting (prereq. ACTG 351)	3 credits
*ACTG	451:	Accounting Problems (prereq. ACTG 355)	3 credits
*ACTG	452:	Advanced Cost Accounting (prereq. ACTG 352)	3 credits

*ACTG	453:	Problems in Federal Taxation Accounting (prereq. ACTG 353)	3 credits
*ACTG	455:	Not-For-Profit Entities (prereq. ACTG 351)	3 credits
*ACTG	490:	Current Accounting Pronouncements and Practice (prereq. Coop 420, Section 01 Accounting Internship)	3 credits
*ACTG	499:	Tax Topics (prereq. Senior Standing and 21 Hours of Accounting Course Work)	3 credits
*ACTG	554:	Advanced Auditing (prereq. ACTG 354)	3 credits
*ACTG	650:	Theory of Accounts	3 credits
*ACTG	652:	Advanced Cost and Managerial Accounting	3 credits
*ACTG	653:	Federal Tax Research and Practice	3 credits
CIS	110:	Computer Information Processing	3 credits
CIS	601:	Information Systems Analysis	3 credits
BSAD	240:	Legal Environment I	3 credits
ECON	603:	Quantitative Analysis for Business Decisions	3 credits
BSAD	690:	Administration and Business Policy	3 credits
ECON	211:	Principles of Economics — Micro	3 credits
ECON	212:	Principles of Economics — Macro	3 credits
ECON	221:	Economics and Business Statistics I	3 credits
ECON	222:	Economics and Business Statistics II	3 credits
ECON	310:	Microeconomic Theory	3 credits
FIN	370:	Financial Management (prereq. ACTG 152)	3 credits
FIN	675:	Advanced Managerial Finance	3 credits
MGMT	320:	Principles of Management	3 credits
MGMT	425:	Production Management (prereq. ECON 221)	3 credits
MGMT	490:	Administrative Decision Making	3 credits
MGMT	521:	Organizations: Structure and Behavior	3 credits
MKTG	360:	Principles of Marketing	3 credits

Elective Credits:

In selecting electives to meet general education requirements students should select the following:

Business Law: Three additional credits should be selected (BSAD 241: Legal Environment II) 3 credits

Intermediate Economic Analysis and the Monetary System: Three credits involved with the study of the monetary system, (e.g., ECON 370: Money and Banking; ECON 410: Managerial Economics) should be selected. 3 credits

Written and Oral Communications: Six credits beyond English III in written and oral communications must be selected.

Three of these credits must be related to written business communications (e.g., ENG 206: Business Writing). Three additional credits must be in oral communications (e.g., SCT 113: Fundamentals of Speech; SCT 114: Advanced Public Speaking; SCT 300: Communication in Business).

A student participating in the professional accountancy course of study must select such courses that all of the general education requirements are met. The courses selected to meet these requirements should be determined jointly by the student and his/her advisor. ACTG 455: Accounting for Not-For-Profit Entities, ACTG 490: Current Accounting Pronouncements and Practice, ACTG 499: Tax Topics, and ACTG 653: Federal Tax Research and Practice are optional, recommended only if there are elective hours available at either the undergraduate or graduate level, and if selected, must be classified as free electives on the existing checksheet for business students.

Suggested Course of Study Sequence:

It is conceivable that the course of study could be completed in as few as ten semesters by following the suggested sequence. Students who are awarded Graduate Teaching Assistantships should expect to extend the time necessary to complete the course of study. Other students may wish to spread their studies over eleven or twelve semesters, depending on their particular needs and abilities.

FIRST SEMESTER			SECOND SEMESTER		
MATH	131:	Math for Business and Economics 3	BSAD	240:	Legal Environment 3
		Written or Oral Communications ... 3	MATH	232:	Math for Business and Econ..... 3
		General Education 10			Written or Oral Communications 3
					General Education 7
THIRD SEMESTER			FOURTH SEMESTER		
ACTG	251:	Financial Accounting ... 3	ACTG	252:	Managerial Actg. 3
ECON	211:	Principles of Econ I 3	ECON	212:	Principles of Econ. II ... 3
ECON	221:	Economics & Bus. Stat. I 3	ECON	222:	Economics & Bus. Stats. II..... 3
BCIS	200:	Computer Info. Processing 3			General Ed. 6
		Written or Oral Communication 3			

FIFTH SEMESTER

ACTG	350:	Intermediate Acctg	3
ACTG	352:	Cost Acctg. Analysis	3
ECON	310:	Intermed. Econ. Analysis	3
FIN	370:	Financial Mgmt.	3
MGMT	320:	Prin. of Management General Ed or Electives	3

SIXTH SEMESTER

ACTG	351:	Acctg. for Equities	3
ACTG	353:	Federal Taxes	3
MKTG	360:	Prin. of Marketing General Ed	6
		Electives (ECON 370 or 410)	3

SEVENTH SEMESTER*

ACTG	354:	Auditing	3
ACTG	355:	Advanced Accounting	3
MGMT	425:	Production Mgmt. General Education	3
		Elective (BSAD 240)	3

EIGHTH SEMESTER*

		Accounting Elective	3
MGMT	490:	Administrative Decision Making	3
		General Education	6-9
		Electives	3

NINTH SEMESTER

ACTG	653:	Federal Tax Research & Practice	3
		or 400 level Acctg. course	3
MGMT	521:	Org. Structure & Behav	3
ACTG	650:	Theory of Accts.	3
ECON	510:	Managerial Econ.	3
ECON	603:	Quant. Analysis for Bus. Decisions	3
		ACTG Elective	3

TENTH SEMESTER

ACTG	652:	Advanced Cost and Managerial Acctg.	3
		or 400 level Acctg. course	3
ACTG	554:	Advanced Auditing	3
CIS	601:	Info. Systems Analysis	3
BSAD	690:	Adm. & Bus. Policy	3
FIN	675:	Adv. Managerial Finance	3

Total Credits: 161

*Students could take 3 credits of graduate work one semester during their senior year, provided they have been admitted to the graduate program, and take 15 credits during each of the last two semesters

DEPARTMENT OF ADMINISTRATIVE SCIENCE

William Fulmer, M.B.A., Chair

Office: Still Hall

Professors: Maggio, Reed, Ackerman; *Associate Professors:* F. Clark, T. Davis, Fulmer; *Assistant Professors:* Bowersox, Kavooosi, Pesek

MANAGEMENT (BSBA)

The following courses are required:

MGMT	321:	Organization Theory and Behavior	3 credits
MGMT	322:	Selection and Management of Business Information Systems	3 credits
MGMT	324:	Personnel Management	3 credits

Three courses from the following:

MGMT	323:	Problems in Small Business
MGMT	325:	Management Seminar
MGMT	420:	Operations Research I
MGMT	421:	Operations Research II
MGMT	426:	International Business
MGMT	427:	Small Business Seminar
MGMT	482:	Collective Bargaining
MGMT	483:	Wage and Salary Administration
MGMT	485:	Industrial Relations and Public Policy
MKTG	361:	Marketing Management
MKTG	366:	Physical Distribution Management
BSAD	437:	International Business Seminar

MANAGEMENT/LIBRARY SCIENCE (BSBA)

The following courses are required:

MGMT	321:	Organization Theory and Behavior	3 credits
MGMT	324:	Personnel Management	3 credits
L.S.	257:	Basic Information Sources & Services	3 credits
L.S.	260:	Development and Administration of Libraries	3 credits

Two of the following: 6 credits

CIS	223:	COBOL
ACTG	353:	Federal Taxes
ECON	351:	Industrial Relations

Required Library Science Courses 6 credits
(would appear on check sheet under free electives)

L.S.	258:	Selection of Library Media
L.S.	357:	Organization of Media

Recommended Electives:

COMM	240:	Locally Produced Media Materials
COMM	315:	Photography
COMM	440:	Media Production Planning
CIS	151:	Introduction to FORTRAN
L.S.	255:	Introduction to Media Librarianship

OFFICE MANAGEMENT (BSBA)

The first two years of this major are offered only at the Venango Campus and lead to the Associate of Arts degree. Students will, at their option, be able to transfer to Main Campus, Clarion, with no loss of credit.

Required courses first two years:

General Education 17 credits

General Business courses 27 credits

Skills area: 18 credits

OFMT	131:	College Typing	2 credits
OFMT	132:	Production Typing	3 credits
OFMT	135:	College Shorthand	3 credits
OFMT	136:	Production Shorthand	3 credits
OFMT	230:	Office Procedures	3 credits
OFMT	221:	Office Management	3 credits
OFMT	231:	Office Practice	3 credits

Business Elective 3 credits

Total for Certificate 62 credits

Students moving into the bachelor's degree program will complete their work on the Clarion Campus. They will be held responsible for all the common requirements for the Bachelor of Science in Business Administration degree and the following specific courses in Administrative Science.

MGMT	321:	Organization Theory and Behavior
MGMT	324:	Personnel Management
MGMT	483:	Wage and Salary Administration
MGMT	485:	Industrial Relations and Public Policy

Additional course work to complete the twenty-four (24) credit obligation for this major is recommended by the student's advisor, subject to approval by the Department of Administrative Sciences chair. Such course work could include:

MGMT	322:	Business Information Systems
MGMT	483:	Wage and Salary Administration
MGMT	485:	Industrial Relations & Public Policy

INDUSTRIAL RELATIONS (BSBA)

The following courses are required:

MGMT	324:	Personnel Management	3 s.h.
ECON	351:	Labor Economics	3 s.h.
MGMT	482:	Collective Bargaining	3 s.h.
MGMT	483:	Wage and Salary Administration	3 s.h.
MGMT	485:	Industrial Relations and Public Policy	3 s.h.

Two courses from the following:

HIST	405:	History of American Labor	3 s.h.
MGMT	321:	Organization Theory and Behavior	3 s.h.
MGMT	325:	Management Seminar	3 s.h.
SOC	351:	Contemporary Social Problems	3 s.h.
ECON	311:	Macroeconomic Theory	3 s.h.
PSY	350:	Industrial Psychology	3 s.h.
BSAD	437:	International Business Seminar	3 s.h.

DEPARTMENT OF ECONOMICS

Sarjit Singh, Ph.D., Chair

Office: Still Hall

Professors: W. Ross, Singh, T. Vernon; *Associate Professor:* E. Dennis
Assistant Professors: Balough, Sanders, Sohng, Stine, Yang

Students may take a major in Economics either in the College of Business or the College of Arts and Sciences.

ECONOMICS (BSBA)

The following courses are required:

ECON	311:	Macroeconomic Theory	3 credits
ECON	361:	International Economic Relations	3 credits
ECON	370:	Money and Banking	3 credits
ECON	490:	History of Economic Thought	3 credits

Three courses from the following:

The student may take any Economics courses listed in the catalog (pp. 188-90) to meet this requirement. Also, Hist. 216: Business in the American Economy, may be used as a course in the Economics major.

DEPARTMENT OF FINANCE

Woodrow W. Yeane, Ph.D., Chair

Office: Still Hall

Professors: VanLandingham, Yeane; *Associate Professors:* Eicher, Pauksta; *Assistant Professors:* Bish, Eichlin, Hawk, W. Henry; *Instructor:* Hall; *Part-Time Instructors:* Lewis, Smathers.

FINANCE (BSBA)

The following courses are required:

FIN	373:	Fundamentals of Insurance	3 credits
FIN	375:	Management of Financial Institutions	3 credits
FIN	376:	Security Markets	3 credits
FIN	471:	Financial Problems	3 credits

Three courses from the following:

FIN	374:	Property and Casualty Insurance	
FIN	473:	Retirement and Estate Planning	
FIN	476:	Security Analysis	
FIN	480:	Multinational Financial Management	
RE	371:	Real Estate Finance	
ECON	370:	Money and Banking	
ECON	371:	Public Finance	

REAL ESTATE (BSBA)

The following courses are required:

RE	270:	Real Estate Fundamentals	3 credits
RE	272:	Real Estate Law	3 credits
RE	371:	Real Estate Finance	3 credits
RE	471:	Real Estate Investment Analysis	3 credits

BROKERAGE TRACK

Three courses from the following: 9 credits

RE	271:	Real Estate Practice	
RE	372:	Brokerage of Real Estate	
RE	470:	Appraisal of Real Estate	
BSAD	241:	Legal Environment II	

INVESTMENT ANALYSIS TRACK

Three courses from the following: 9 credits

RE	470:	Appraisal of Real Estate	
FIN	376:	Security Markets	
FIN	476:	Security Analysis	
ECON	314:	Urban and Regional Economics	

All courses with an RE designation have been approved by the Pennsylvania Real Estate Commission for three credits each toward meeting the education requirements for real estate brokerage licensing.

RE 270 and 271 are the only approved courses applicable toward meeting requirements of the salesperson licensing examination.

DEPARTMENT OF MARKETING

Paul Y. Kim, Ph.D., Chair

Office: Still Hall

Professor: Grunenwald; *Associate Professors:* Kim, T. Traynor; *Assistant Professor:* L. Felicetti

MARKETING (BSBA)

The following courses are required:

MKTG	461:	Market Research	3 credits
MKTG	465:	Marketing Problems	3 credits

Two of the following: 6 credits

MKTG	361:	Marketing Management
MKTG	363:	Advertising Management
MKTG	468:	Consumer Behavior

Two of the following 6 credits

MKTG	362:	Retailing Management
MKTG	364:	Salesmanship
MKTG	365:	Industrial Marketing
MKTG	366:	Physical Distribution Management
MKTG	460:	Sales Management
MKTG	361, 363, 468,	listed above

Each marketing major will be required to take one approved business or economics course with international content.

TYPICAL PROGRAM FOR BUSINESS ADMINISTRATION STUDENTS

1ST SEMESTER			2ND SEMESTER		
ENG	111	Eng. Comp.	3	Math*	.....3
		Gen. Ed. Elec.	9	Humanities	6
HPE	111	Health Ed.	2	Gen. Ed. Elec.	6
		Math*	3	Phys. Ed.	1
			17		16

*NOTE: Students in Business need 6 credits in Math 131, 232, or their equivalents.

3RD SEMESTER

CIS	110	Comp. Info. Proc.	3
ECON	211	Prin. I	3
ECON	221	Econ. & Bus. Stat. I	3
BSAD	240:	Legal Env. I	3
ACTG	251:	Financial Actg.	3
		Phys. Ed.	1
			<u>16</u>

4TH SEMESTER

ECON	212	Principles II	3
ECON	222	Econ. & Bus. Stat. II	3
		Humanities	3
		Soc. Sci.	3
ACTG	252:	Managerial Actg.	3
			<u>15</u>

5TH SEMESTER

MKTG	360:	Prin. of Mkt.	3
FIN	370:	Fin. Mgmt.	3
ECON	310:	Micro	3
MGMT	320:	Prin. of Mgmt.	3
		Soc. Sci.	3
			<u>15</u>

6TH SEMESTER

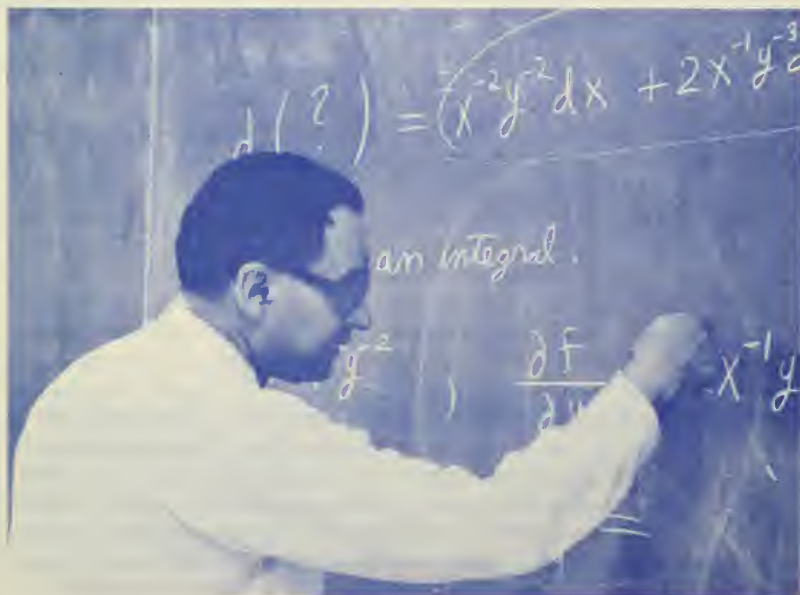
		Bus. Major	9
		Gen. Ed. Elec.	3
		Elec.	3
			<u>15</u>

7TH SEMESTER

		Bus. Major	9
MGMT	425:	Prod. Mgmt.	3
		Elec.	6
			<u>18</u>

8TH SEMESTER

		Bus. Major	6
BSAD	490:	Adm. Dec. Mak.	3
		Elec.	7
			<u>16</u>



COLLEGE OF COMMUNICATION AND COMPUTER INFORMATION SCIENCE

James H. Cole, Ed.D., Dean

Office: Becker Hall
Telephone Extension: 2328

DEPARTMENT OF COMMUNICATION

Allan D. Larson, Ph.D., Chair

Office: Becker Hall
Telephone Extension: 2245

Professors: Cole, Felicetti, Metcalf; *Associate Professors:* Baker, Fueg, Larson, Pfaff; *Assistant Professors:* Barlow, Lloyd, Marini; *Part-Time Instructor:* Frasher

The Department of Communication offers a broadly-based program leading to the Bachelor of Science Degree in Communication. It is interdisciplinary in nature, requiring courses from English, Speech Communication, Business, Philosophy, and the Department of Communication.

The program is designed to develop the student's ability to write and speak effectively, and to use other media — radio, television, film, photography, and the print medium — for specific purposes. Required courses in business, computer science, and logic provide a basic understanding of organizational behavior and skills necessary to function effectively in a variety of organizations. Electives may be selected from any academic area of the university. If desired, they may be concentrated to provide additional training for specific career goals.

Graduates have assumed positions in business, industry, governmental agencies and non-profit organizations in public relations, advertising, radio and television broadcasting, employee training and publication functions.

Students majoring in Communication must complete 48 credits in General Education, which includes Natural Science and Mathematics, Social Sciences, Humanities, and Personal Development and Life Skills. In addition to general education, major, and elective course requirements, students are required to participate four semesters in co-curricular media activities to include at least one broadcast-oriented organization and one print-oriented organization. Broadcast organizations are

cable TV 5, WCUC-FM non-commercial FM radio station, and WCCB carrier current AM radio station. Print organizations are Clarion's Call campus newspaper and Sequelle yearbook. Students who wish to fulfill this requirement by working for another radio or television station or newspaper may do so with agreement of both academic advisor and employer. Students may receive co-curricular credit for work with the Sports Information Office and as chair of public relations for the Commonwealth Association of Students if both broadcast and print organization requirements are also met. Other options may be approved by the faculty of the Department of Communication.

Physical facilities for the program include a full-color television studio, FM radio station, photographic laboratory and darkrooms, and graphics area. The student is expected to own or have access to a 35mm camera with variable focus and f stop, and a built-in or separate light meter. The Department of Communication can be contacted to provide guidance in selecting an appropriate camera. Some courses require additional student expenditure for supplies and equipment. Check in the departmental office for up-to-date requirements and estimated costs.

COMMUNICATION, B.S.

64 credits

Required courses: English 200, 201, 206; SCT 113, 115 or 264, 300 or MGMT 320, 321; ACTG 151; ECON 211; CIS 200, PHIL 111; COMM 100, 152, 171, 251, 271, 351, 352, 451, 452.

DEPARTMENT OF COMPUTER INFORMATION SCIENCE

Dale A. Brown, Ph.D., Chair

Office: 106 Becker Hall

Telephone Extension: 2442

Professors: D. Brown, E. Ross; Associate Professor: T. Schaeffer; Assistant Professors: C. Dean, R. Fleck, J. Holden, S. Traynor; Adjunct Faculty from Mathematics, Chemistry, and the Computer Center.

The Department of Computer Information Science offers two majors leading to the Bachelor of Science in Computer Science. One of these is the major in Computer Application and Information Systems, which prepares the student for careers in business application programming and business systems analysis. It places heavy emphasis on the COBOL programming language and on the principles necessary for computer usage in a business and financial environment.

The other major is a Computer Science curriculum preparing students for careers in systems programming, computer systems analysis, and systems management. It places heavy emphasis on mathematical foundations of computation and principles of data organization and computer system software.

Students in both majors are strongly encouraged to take computer course work outside their major area. The Department's emphasis is on practical computer application and the programs of study are designed with this as a major goal.

Clarion University of Pennsylvania is unique among the 14 state institutions in terms of the depth and diversity of its computing facilities. The University maintains two major academic computer areas on campus in addition to providing access to microcomputer equipment in several locations. The Still Business Administration Building houses a small IBM mainframe and a Sperry/Univac 90/70 system. The Sperry/Univac system is shared for administrative and academic purposes while the IBM system is primarily dedicated to student usage. Access facilities for both systems are maintained in Still Hall. The second academic computing access area is in Becker Hall. Several microcomputer systems and high speed terminal connections to the Sperry/Univac mainframe are maintained in this area. In addition a twenty four user minicomputer utilizing a Unix operating system is available for student usage. Clarion is committed to providing those computer resources required to support the computing program. All major programming languages are available on the university's systems.

REQUIRED COURSES:

CIS MAJORS

ECON 211, 212, MATH 131, ACTG 251, 252, ECON 221, 222, MGMT 320, 360, 425, FIN 370, CIS 110, 223, 224, 301, 402, 403.

COMPUTER SCIENCE MAJORS

MATH 172, 271, 370, MATH/CIS 240, CIS 163, 164, 253, 254, 255, 350, 355, 356, 357, 460, 469.

SUGGESTED COURSE SEQUENCING:

CIS MAJORS

CIS 110, 223, and 224 should be taken in sequence during the first two years. CIS 151, 211, and 212 should be taken in the first two years but after CIS 110. CIS 301, 402, and 403 should be taken during the last two years. Optional electives for the last two years are CIS 253, 302, and 462.

COMPUTER SCIENCE MAJORS

Major requirements numbered in the one hundreds, two hundreds, three hundreds, and four hundreds should be taken in the freshman, sophomore, junior, and senior years, respectively. However, many students elect to take MATH 271 as freshmen, and other exceptions are frequently advisable.

COLLEGE OF EDUCATION AND HUMAN SERVICES

Dr. Thomas J. Matczynski, Ph.D., Dean

Office: Becker Hall

Telephone Extension: 2146

The College of Education and Human Services offers programs to prepare professional educators and other human services personnel. Seven specialized curricula are offered in professional education; early childhood education, elementary education, library science, music education, secondary education, special education, and speech pathology and audiology. An additional certification program is available in environmental education. Each teacher education curriculum is designed to meet the graduation requirements of the university, the certification requirements of the state, and the accreditation standards of various professional groups. In the human services field, programs are offered in habilitative sciences and speech and hearing science at the bachelor degree level, and in habilitative services at the associate degree level. All programs involve classroom, laboratory, and practicum experiences.

TEACHER EDUCATION

Role Statement

In its teacher preparation program Clarion is committed to educating its students to play six important roles in the educational process.

First, the teacher serves as a model of the academic culture. In this role the teacher is expected to be competent in standard English in both its written and oral forms; to be conversant with the major domains of knowledge as they are reflected in the humanities, the social sciences, and the natural sciences and mathematics; to be committed to scholarship and intelligence.

Second, the teacher serves as a resource for a school and community in a particular area of expertise. In this role the teacher is expected to display comprehensive and extensive knowledge in the area of specialization; to demonstrate ability to elaborate upon content, simplify material, and integrate knowledge; and to be sufficiently grounded in the basic concepts, principles, and methods of operation associated with that specialization to be able to pursue advanced study.

Third, the teacher serves as a facilitator of learning for his or her students. In this role the teacher is expected to establish both short and long-range goals for student teaching, to provide sound and effective

learning experiences, to utilize a variety of assessment techniques, to establish a positive learning environment, to utilize available time and materials effectively, and to apply learning theory to classroom practices.

Fourth, the teacher serves as a facilitator of democratic attitudes. In this role the teacher is expected to respect students and individuals and to be accepting of them in their differences, to help them develop wholesome self-images, to support their creativity and originality, and to exhibit an awareness of an appreciation for the contribution that men and women from various racial and ethnic backgrounds have made to the human condition.

Fifth, the teacher serves as a professional educator. In this role the teacher is expected to serve as a responsible member of a school's professional staff, playing leadership and supportive roles as appropriate; to demonstrate high ethical standards in working with students, parents, and colleagues; to participate in the shaping of educational policies for the school and the teaching profession; and to be committed to continuing personal and professional development.

Sixth, the teacher serves as his or her own role definer. In this role the teacher is expected to identify, develop, and articulate his or her own truths about education, teaching and learning, schools, and the role that a teacher should play in the educational community.

Certification

Students who complete one of the teacher education curricula at Clarion and who are awarded a baccalaureate degree are qualified for the Pennsylvania Instructional I Certificate, valid for six years of teaching. Applications for the certificate must be made by the student and the certificate issued before graduates may teach in the public schools of Pennsylvania. Since recommendation for certification is based upon program requirements in effect when the application is filed, students are urged to do this during the semester in which they plan to graduate. Applications are available in the Office of Field Services.

To obtain the Instructional II or permanent certificate applicants must have three years of satisfactory teaching experience on the Instructional I certificate in approved schools of this Commonwealth and the satisfactory completion of twenty-four (24) semester hours of post-baccalaureate or approved in-service education.

Any certificate may be extended to include other teaching fields by completing an approved program in that area. Students not enrolled in a program leading to a Bachelor of Science in Education degree can make application for teacher certification by obtaining admission to and completing one of the university's approved programs in teacher education. For further information, consult the Dean's office, College of Education and Human Services.

General Requirements

GENERAL EDUCATION

To qualify for graduation, each student must satisfy the general education requirement of the university, which specifies the completion of 48 hours of credit in accord with the distribution presented on page 67.

PROFESSIONAL EDUCATION

Candidates for certification in a teaching field must complete the professional and special requirements for that field, as indicated below:

Early Childhood Education, see pages 114-116.

Elementary Education, see pages 112-114.

Library Science Education, see pages 147-148.

Music Education, see pages 119-122.

Secondary Education, see pages 123-133.

Special Education, see pages 134-137.

Speech Pathology and Audiology, see pages 141-143.

TEACHER EDUCATION SELECTION AND RETENTION STANDARDS

I. Admission to Teacher Certification Program

Requirements:

- A. Completion of 45 semester hours including 6-9 semester hours of introductory courses in professional education to be determined by the Program Council of the College of Education and Human Services. Professional education courses must be completed with a grade of C or better.
- B. Basic skill competency in written expression, oral communication, and computation as evidenced by grades of C or better in English 111, SCT 113, and a mathematics course numbered higher than Mathematics 110. Accepted university proficiency examinations may be substituted for courses as specified in this catalog.
- C. A minimum quality point average of 2.25 for all courses completed.
- D. A departmental/advisor interview resulting in a recommendation or, if deficiencies are identified, in a student-advisor developed plan to remove the deficiencies and maintain at least a 2.25 overall quality point average for each semester subsequent to admission to the certification program.
- E. Enrollment in professional core courses only upon admission to teacher certification.

II. Admission to Student Teaching

- A. Satisfactory standing in relation to all admission and retention requirements of the university and the Teacher Education Program.
- B. Completion of at least 80 semester hours of university credit and all applicable pre-professional field experiences.
- C. Satisfactory completion of all teaching methods courses as evidenced by grades of C or above in such courses.
- D. Minimum quality point average of 2.25 for all general education courses.
- E. Minimum quality point average of 2.25 for all professional education courses and for all courses applicable to each field of concentration.
- F. No semester hours of failure in required courses in general education and professional education.
- G. Compliance with the Public School Code of 1949, as amended, Article XII, Section 1209, which in part provides that teaching certification may not be issued unless the "applicant is neither mentally or physically disqualified, by reason of tuberculosis or any other communicable disease or by reason of mental disorder from successful performance of the duties of a teacher."

III. Graduation Requirements

- A. Fulfillment of all university standards for graduation.
- B. A minimum grade of C in each student teaching experience.
- C. A minimum cumulative quality point average of 2.25 for all course work; a minimum of 2.25 for all general education courses, for all professional education courses, and for all courses presented as part of any field of concentration.

IV. Transfer Students

Each transfer student must follow the selection and retention standards of the College of Education and Human Services. Transcripts will be evaluated by the College Dean and any deficiencies will be noted. The transfer student and Dean will develop an individual plan to remove any deficiencies identified. Once deficiencies are removed, the student may be admitted to teacher certification.

V. Petitions Procedure

The faculty of the College of Education and Human Services recognizes that there may be times when special circumstances arise which may legitimately justify the waiver of certain policies and/or standards. Students who have failed to meet the policies and/or stan-

dards because of unusual and extenuating circumstances are permitted to file a petition with the College. Petition forms are available in the Office of the Dean. All petitions must be written, must be addressed to the Dean, and must be filed prior to the last five weeks of classes. The Dean will submit each petition to the College-Wide Petitions Committee for review and recommendation. The Committee will make a recommendation to the Dean based on a majority decision. The Dean will take this recommendation under advisement and contact the student in writing regarding the decision, with copies to the Petitions Committee and the student's academic advisor.

APPLICATION PROCEDURES FOR STUDENT TEACHING

1. Read the conditions for assignments and qualifications for student teaching carefully.
2. Take this information and form entitled Application for Student Teaching to your advisor.
3. Complete ALL sections of the form with the advisor.
4. The student returns the Application for Student Teaching Form to the Director's Office.
5. Questions concerning assignment, should be presented to the Director, Office of Field Services.

CONDITIONS FOR ASSIGNMENT

1. Applicants will follow the UNIVERSITY CALENDAR for their entire assignment. (Exception: Fall semester student teachers will begin their assignments according to the public school calendar.)
2. Applicants will not be assigned to do student teaching in schools which they have formerly attended as grade or high school pupils, except under special conditions.
3. Applicants will be assigned to selected school clusters by the Office of Field Services.
4. Applicants' assignments will be for five days a week — for a full semester.
5. Applicants will be encouraged to reside in the community to which they are assigned. However, student teachers will be responsible for their own travel and rooming arrangements.
6. Tentative student teaching assignments for fall will be made before spring break; tentative student teaching assignments for spring will be made before Thanksgiving break.
7. Applicants will report any changes in status or plans to the Director, Office of Field Services, whenever they occur.
8. All qualifications must be fulfilled prior to the start of student teaching.

DEPARTMENT OF EDUCATION

Earl R. Siler, Ed.D., Chair

Professors: Moorhouse, Siler, P. Smith, Uzmack, Zaeske; *Associate Professors:* Battista, Kenemuth, Klindienst, Levine, Palaggio, J. Smith, Yoho; *Instructors:* L. Brown, Ealahan

The Education Department offers a baccalaureate program leading to certification in Elementary Education (K-6). In addition, dual certification programs (El.Ed./E. Ch. [N-3], El.Ed./Sp.Ed., and El.Ed./L.S.) are offered. The Department is also responsible for graduate programs in Elementary Education, Reading and Supervision.

ELEMENTARY EDUCATION

Knowledge in all content areas of the elementary school curriculum, pedagogical and human relations skills, as well as the philosophical and psychological foundations of education are developed through a combination of theoretical studies and field experiences with students. A wide variety of academic concentrations are offered for those students wishing a specialization. An endorsement to teach environmental education may be acquired; a program in coaching is also available.

Program Requirements

GENERAL EDUCATION

The elementary major should fulfill the general education distribution requirements noted on page 67.

PROFESSIONAL COMPETENCY

The elementary education major is expected to show competency in the following content areas: biology, chemistry, earth science, English composition, humanities, humanities elective, HPE elementary activities, introduction to the English language, mathematics, music, non-western culture, physics, political science, social science elective, speech, and U.S. history.

PROFESSIONAL EDUCATION

The following courses are required of all elementary majors:

			c.h.	s.h.
*Art	190	Teaching Art in the Elementary Grades	3	3
E.Ch.	321	Child Development	3	3
Ed.	110	Introduction to Education	3	3

Ed.	224	Educational Evaluation	3	3
*Ed.	225	Multicultural Education	1	1
Ed.	226	Basic Teaching Skills	2	2
*Ed.	227	Classroom Management	3	3
*Ed.	427	Exceptionalities in the Regular Classroom	3	3
*El.Ed.	323	Teaching of Reading	3	3
*El.Ed.	324	Teaching of Elementary School Mathematics	3	3
*El.Ed.	325	Teaching of Elementary School Social Studies	3	3
*El.Ed.	326	Reading Problems in the Elementary School	3	3
*El.Ed.	330	Communication Arts in the Elementary School	2	2
*El.Ed.	331	Children's Literature	3	3
*El.Ed.	424	Elementary Student Teaching		12
*HPE	323	Modern Curriculum and Methods	1	1
*Mus	132	Basic Music Methods	2	2
Psy	322	Educational Psychology	3	3
*Sci. Ed.	322	Teaching of Elementary Science	3	3
SPA	455	Speech Correction for the Classroom Teacher	3	3

*Courses so designated are part of two professional blocks which will be taken during the junior and/or senior years. Each of these blocks will include classroom participation in surrounding schools.

NOTE: Students electing dual certification (elementary education/ special education or elementary education/library science) are required to take 6 semester hours of El.Ed. 424 and 6 semester hours of either Sp.Ed. 450 (Student Teaching) or Ed. 423 (Library Practice).

TYPICAL PROGRAM FOR ELEMENTARY MAJORS

1ST SEMESTER

Ed.	110:	Intro. to Ed.	3
Eng.	111:	Eng. Comp.	3
Biol.	111:	Basic Biology	4
Soc. Sci.		Elective	3
		Elective	3
			<u>16</u>

2ND SEMESTER

Hist.	120:	or U.S. History	3
E.Ch.	321:	Child Development	3
SCT	113:	Fund. of Speech	3
E.S.	111:	Earth Science	3
		Non-Western Culture ...	3
Hum.	121:		<u>3</u>
			18

3RD SEMESTER

Phys. Sci.	111:	Chemistry	3
SPA	455:	Speech Correction	3
HPE	111:	Health	2
Math	111:	Basic Math	3
		Elective	3
			<u>14</u>

4TH SEMESTER

Psy.	322:	Ed. Psy.	3
Phys. Sci.	112:	Physics	3
		Elective	3
Ed.	224:	Ed. Eval.	3
HPE		Activity	1
Math	211:	Mod. Concepts	3
			<u>16</u>

5TH SEMESTER

Eng.	252:	Intro. Eng. Lang.	3
Ed.	226:	Basic Tch. Skills	2
		Elective	3
Mus.	131:	Fund of Music	2
		Elective	3
Pol. Sci.	211:	Am. Govt.	3
			<u>16</u>

6TH SEMESTER

El.Ed.	323:	Tch. Reading	3
El.Ed.	324:	Tch. Math	3
El.Ed.	331:	Child. Lit.	3
El.Ed.	330:	Communication Arts ...	2
Mus.	132:	Basic Music Methods ...	2
HPE	223:	P.E. El. Majors	1
Ed.	427:	Exceptionalities	3
			<u>17</u>

7TH SEMESTER

El.Ed.	325:	Soc. Studies	3
El.Ed.	326:	Reading Prob.	3
Sci.Ed	322:	Tch. Sci.	3
Art	190:	Art in El. Gr.	3
Ed	227:	C.R. Mgmt.	3
HPE	223:	Mod. Cur.	1
Ed	225:	Multi-Cultural Ed.	1

17

8TH SEMESTER

El.Ed.	424:	Stu. Teaching	12
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Academic Concentrations for Elementary Majors

Elementary majors who wish to do so may take an academic concentration in the following areas: art, biology, chemistry/physics, English, exceptional children and youth, foreign language, geography, geology, history, library science, mathematics, music, natural science, philosophy, political science, psychology, reading, education, speech communication and theater, social studies, and sociology-anthropology.

Students who wish to take a concentration should consult with their advisor in elementary education and a representative of the department or departments offering the concentration to select the specific courses to be taken.

EARLY CHILDHOOD EDUCATION

Students in Early Childhood Education pursue dual certification in Early Childhood/Elementary Education. By special arrangements, additional certification in Special Education or Library Science may be obtained. The program has a broad-based theoretical approach which includes Bruner, Dewey, Erickson, Piaget, Rugers, Mazelow, Montessori and Skinner. Education of the child is approached from a holistic perspective. Intellectual, social, emotional and psychomotor development are all considered essential to the learning process. Continuing opportunities are provided students to plan, implement and evaluate learning experiences with young children two-to-eight years of age. The process enables future teachers to integrate the theoretical concepts of child development with the practical concerns of the classroom environment. The structure of the program requires the student to assess and develop personal and professional competencies through interaction with professionals in Early Childhood Education.

Program Requirements**GENERAL EDUCATION**

To qualify for graduation, each student must satisfy the general distribution requirements noted on page 67.

PROFESSIONAL COMPETENCY

The Early Childhood Certification candidate is expected to show

competency in the following content areas: biology, chemistry or physics, earth science, English composition, humanities, humanities elective, H.P.E. elementary activities, Introduction to the English language, math, music, non-western culture, political science, social science elective, speech, U.S. history.

PROFESSIONAL EDUCATION

Students in the Early Childhood/Elementary Education Certification program are required to complete the same Professional Education courses as students enrolled in the Elementary Education Certification program. (See pages 112-13.)

Students in the Early Childhood/Elementary Education Certification Program are also required to complete 9 hours of work in Early Childhood Education.

E.Ch.	231	Creative Activities	3
E.Ch.	332	Nursery-Kindergarten	3
E.Ch.	335	Seminar in Early Childhood	3

In addition, Early Childhood/Elementary Education majors must take 12 hours of electives chosen with the advisor's approval from any four of the following areas: anthropology, art, business, early childhood education, general studies, H.P.E., music, psychology, S.C.T., sociology, SPA, special education.

Anth.	251	Historic Indians of North America	3
Anth.	354	Cultural History of Africa & Asia	3
Anth.	360	Introduction to Folklore	3
Art	111	History of Art I	3
Art	112	History of Art II	3
Art	192	Elementary Art Workshop (summer)	3
CIS	200	Computer Information Processing	3
BSAD	240	The Legal Environment I	3
E.Ch.	333	Developmental Programming for Infants and Toddlers	3
E.Ch.	401	Creative Response to Conflict	3
E.Ch.	420	Incidental Learning	3
Ed.	224	Educational Tests and Measurements	3
Ed.	427	Exceptionalities in the Regular Classroom: Identification and Services	3
Ed.	455	Exceptionalities in the Regular Classroom: Organization and Instruction	3
G.S.	330	Problems and Prospects in the Inner City	3
HPE	310	Adapted Physical Education for the Elementary School	2
HPE	414	First Aid and Safety	2
Music	231	Teaching Music Creatively	3
Music	232	Keyboard Skills	3
Music	431	Music in Early Childhood	3
Psy.	225	Psychology of Adjustment	3
Psy.	260	Developmental Psychology	3
SCT	455	Creative Dramatics for Elementary Teachers (spring)	3
Soc.	351	Contemporary Social Problems	3
Soc.	352	The Family	3
Soc.	362	Racial, Ethnic, & Minority Problems	3
SPA	455	Speech Correction for the Classroom Teacher	3
Sp.Ed	210	Human Exceptionalities	3

TYPICAL PROGRAM FOR EARLY CHILDHOOD EDUCATION

The typical program for students seeking Early Childhood/Elementary Education Certification is similar to the program outlined on page 113 for students in elementary education. Students in the dual certification program should be aware that an extra semester of course work is needed to complete all the requirements. This could also be accomplished by attending two or three summer sessions.

ELEMENTARY EDUCATION/SPECIAL EDUCATION

With careful planning, students can complete programs leading to certification in both elementary education and special education, thereby becoming eligible to teach in both regular and special classrooms. The dual certification will also help students meet the challenges of mainstreaming. In addition, several states are now requiring dual certification to teach handicapped individuals. See page 136 in the Special Education section for a typical schedule.

ENVIRONMENTAL EDUCATION

Sponsored by an interdisciplinary committee, the curriculum in environmental education, open only to students who are enrolled in or have completed a teacher education program, leads to an endorsement on any instructional certificate and prepares teacher-educators to develop and implement in-school and outdoor environmental education programs in both elementary and secondary schools. Since the program is competency based, the total semester hours needed to complete it will depend upon the student, his or her major field of study, and outside work experience. Students applying for admission in their freshman year may normally expect to complete the program within the usual number of hours required for graduation.

Graduate students in some areas may also complete as part of a Master's program an endorsement to their instructional certificate in Environmental Education by selecting appropriate courses under advisement.

Application for admission to the program is through the Chairman of the Environmental Education Committee.

REQUIRED COURSES

		c.h.	s.h.
Envir. St. 401	Environmental Problems in Society.....	3	3
Geog. 254	Conservation of Natural Resources.....	3	3
Ed. 401	Methods in Environmental Education.....	3	3
El.Ed. or Ed. 424	Student Teaching.....	Variable Credit	

REQUIRED AREAS OF STUDY

In addition to the courses listed above, students need additional experiences and competencies in field studies, nature oriented studies, and man oriented studies to further their understanding of the relationships between human institutions and value systems and their supporting environment. A listing of courses appropriate to these areas can be obtained from the Dean, College of Education and Human Services.

DEPARTMENT OF HEALTH AND PHYSICAL EDUCATION

Albert A. Jacks, Jr., M.Ed., Chair

Professors: Lignelli, Taylor; *Associate Professors:* Baschnagel, Bubb, Jacks, Leas, Leonard, Pae, Ruslavage, Shope, Sobolewski; *Assistant Professors:* Davis, English, Miller, Rutt; *Instructor:* Truitt-Bean

Through its general education courses and intramural program, the department provides students with extensive opportunities to develop sound health habits and life-long skills in a variety of sports and other physical activities. Although the department does not offer any programs leading to the bachelor's degree, it does offer an athletic coaching program.

ACTIVITY AND RECREATION COURSES

INDIVIDUAL SPORTS AND ACTIVITIES

HPE	140	Archery	1
HPE	141	Badminton	1
HPE	142	Bowling	1
HPE	143	Golf	1
HPE	144	Handball and Racquetball (men's rules)	1
HPE	145	Racquetball (women's rules)	1
HPE	146	Cross Country Skiing	1
HPE	147	Beginning Tennis	1
HPE	148	Wrestling	1
HPE	150	Canoeing	1
HPE	247	Intermediate Tennis	1
HPE	249	Camping and Outdoor Recreation	2

TEAM SPORTS AND ACTIVITIES

HPE	161	Basketball (men's rules)	1
HPE	162	Basketball (women's rules)	1
HPE	163	Volleyball (men's rules)	1
HPE	164	Volleyball (women's rules)	1

AQUATIC COURSES

HPE	131	Beginning Swimming	1
HPE	230	Senior Life Saving	1
HPE	231	Intermediate Swimming	1
HPE	233	Springboard Diving	1
HPE	330	Water Safety Instructor	1
HPE	332	Advanced Aquatics	1

DANCE COURSES

HPE	171	Modern Dance	1
HPE	173	Aerobic Dancing I	1
HPE	273	Aerobic Dancing II	1

HEALTH AND FIRST AID COURSES

HPE	111	Health Education	2
HPE	314	Cardio Pulmonary Resuscitation	1
HPE	317	First Aid and Safety	2

PHYSICAL FITNESS COURSES

HPE	181	Adapted Physical Education	1
HPE	182	Posture and Body Mechanics	1
HPE	185	Physical Fitness and Conditioning	1
HPE	186	Physical Fitness through Weight Lifting	1

*Required for the Athletic Coaching Program.

SPECIALIZED COURSES

Elective Theory and Technique of Coaching Individual Sports

HPE	343	Theory and Technique of Coaching Golf	1
HPE	344	Theory and Technique of Coaching Track and Field	2
HPE	345	Theory and Technique of Coaching Swimming	2
HPE	346	Theory and Technique of Coaching Gymnastics	2
HPE	347	Theory and Technique of Coaching Tennis	1
HPE	348	Theory and Technique of Coaching Wrestling	2

Elective Theory and Technique of Coaching Team Sports

HPE	351	Theory and Technique of Coaching Basketball	2
HPE	352	Theory and Technique of Coaching Baseball	2
HPE	353	Theory and Technique of Coaching Volleyball	2
HPE	354	Theory and Technique of Coaching Football	2

Required Coaching Courses

HPE	406	Athletic Injuries	3
HPE	407	Physiological Foundations of Coaching	3
HPE	408	Principles and Problems of Athletic Coaching	3
HPE	409	Kinesiological Foundations of Coaching	3

Elementary Major Courses

HPE	223	Physical Education for Elementary Majors	1
HPE	323	Modern Curriculum and Methods in Elementary Physical Education	1
HPE	326	Adapted Physical Education for the Elementary School	3

ATHLETIC COACHING PROGRAM — 19 semester hours

The athletic coaching program* is established for those who intend to coach in interschool athletic programs but do not have a degree in physical education. Students who complete the Athletic Coaching Program successfully are issued a letter of verification.

The minimum requirement for this program is 19 credit hours, 12 of which are required: HPE 406, 407, 408, and 409. The other 6 credit hours may be selected from the Theory and Technique of Coaching courses: HPE 343, 344, 345, 346, 347, 348, 351, 352, 353, or 354.

The university grants a maximum of 4 credits in HPE for active military service of 6 months or more with honorable discharge or continued reserve status. Credit is normally given for HPE 111, (2 credits) and 2 HPE activity courses of 1 credit each. To assure that the credit is granted, students should bring an honorable discharge document to the Records Office, Carrier Administration Building.

*Not a Public School Certification field.

LIBRARY SCIENCE

Information on certification as a school librarian in Pennsylvania is included under the College of Library Science. See pages 146-48.

MUSIC EDUCATION

The curriculum for majors in music education at Clarion, leading to the degree Bachelor of Science in Music Education, combines a broad requirement in general education with advanced study in theory, history and literature of music, applied music, specialized courses in music education, and participation in performing organizations. The emphasis of the program is two-fold.

- A. The achievement of significant musical understanding and ability: *Musicianship*.
- B. The development of skills and techniques necessary for the effective communication of music understanding and ability to others: *Teaching Ability*.

The purpose of this program is to prepare prospective public school teachers specializing in music education, with certification in all of the following areas:

- A. Elementary music education, from kindergarten through the sixth grade, vocal and instrumental.
- B. Junior high school music programs, including general music, instrumental and vocal classes.
- C. Secondary school music programs, including all vocal and instrumental activities, general music, and elective academic courses.

PROGRAM REQUIREMENTS

GENERAL EDUCATION

The general education distribution for all students in the college is presented on page 67.

PROFESSIONAL EDUCATION

			Sem. Hrs.
Ed	110	Intro. to Education	3
Psy	322	Educational Psychology	3
Ed	427	Exceptionalities in the Regular Classroom	3
Mus	333	Elementary Music Methods	3
Mus.	334	Junior High and Secondary Music Methods	3
Mus.	362	Instrumental Methods	2
Mus.	363	Vocal Methods	2
Ed	432	Student Teaching	12
Total			31

AREA OF SPECIALIZATION

Mus.	135	Theory of Music I	4
Mus.	136	Theory of Music II	4
Mus.	235	Theory of Music III	4
Mus.	236	Theory of Music IV	4
Mus.	151	History & Literature of Music I	3
Mus.	152	History & Literature of Music II	3
Mus.	251	History & Literature of Music III	3
Mus.	252	History & Literature of Music IV	3
Mus.	365	Conducting I	2
Mus.	366	Conducting II	2
Mus	367	Orchestration	2

KEYBOARD AND VOICE PROFICIENCY

PIANO (required of all but piano majors*)

Mus.	160	Piano Class I	1
Mus.	161	Piano Class II	1
Mus.	171	Piano	1

VOICE (required of all but voice majors*)

Mus.	162	Voice Class I	1
Mus.	163	Voice Class II	1

*Students whose applied area is Voice or Piano will substitute an approved music elective (3 credits)

PIANO COMPETENCY TEST

The Piano Competency Test is required of all Music Education majors in order to qualify for student teaching. Students are expected to complete the requirements and take the competency test by the end of their sophomore year.

INSTRUMENTAL TECHNIQUES Minimum of 5

Once course for each family of instruments is required.

Mus.	280	I: Violin, Viola
Mus.	281	II: Cello, String Bass
Mus.	282	III: Flute, Oboe, Saxophone

Mus.	283	IV: Clarinet, Bassoon
Mus.	284	V: Trumpet, French Horn
Mus.	285	VI: Trombone, Baritone Horn, Tuba
Mus.	286	VII: Percussion

APPLIED FIELD OF PERFORMANCE.....7

Instrument — (Mus. 164, 165, 166, 167, 168, 169 or 170): Piano (Mus. 171): Voice (Mus. 172): Organ (Mus. 173)

PERFORMING ORGANIZATION

Seven semesters of participation is required. Optional 1 credit per semester may be counted toward graduation. No more than 8 credits can be counted toward graduation requirements.
 Total credits in specialization sequence..... 51-52

ATTENDANCE AT RECITALS

Students pursuing degree programs are required to attend the bi-weekly student recital series for seven to eight semesters as an extension of their curricular and performance activities.

JUNIOR/SENIOR RECITAL

Students who wish to perform a junior or senior recital must audition in the spring semester preceding the academic year in which the recital is to be scheduled.

TYPICAL PROGRAM IN MUSIC EDUCATION

Sample four-year curriculum for students whose field of performance is instrumental. The curriculum for students whose field of performance is piano or voice is similar.

1ST SEMESTER: 16 s.h.

				s.h.
Gen. Ed. requirements	Mus.	135	Theory of Music I	4
or Electives.....9			Applied Music	1
9	Mus.	160	*Piano Class I	1
			**Inst. Tech.	1
			***Performing Org.	0-1
				7-8

2ND SEMESTER: 17 or 18 s.h.

	Gen. Ed. requirements or Electives.....	9	Mus.	136	Theory of Music II	4
					Applied Music	1
HPE	Physical Education	1	Mus.	161	*Piano Class II	1
		10			**Inst. Tech.	1
					***Performing Org.	0-1
						7-8

3RD SEMESTER: 17 or 18 s.h.

HPE	Gen. Ed. requirements	Mus.	235	Theory of Music III	4
	or Electives	Mus.	151	His. & Lit. of Mus. I	3
	Physical Education			Applied Music	1
		Mus.	171	*Piano	1
				**Inst. Tech.	1
				***Performing Org.	0-1
					10-11

4TH SEMESTER: 17 or 18 s.h.

Ed. HPE	110	Gen. Ed. requirements	Mus.	236	Theory of Music IV	4
		or Electives	Mus.	152	His. & Lit. of Mus. II	3
		Intro. to Education			Applied Music	1
		Health Education			**Inst. Tech	1
					***Performing Org.	0-1
						9-10
						8

5TH SEMESTER: 18 s.h.

		Gen. Ed. requirements	Mus.	251	His. & Lit. of Mus. III	3
		or Electives	Mus.	365	Conducting I	2
Psy.	322	Education. Psy.			Applied Music	1
Mus.	333	Elem. Mus. Methods	Mus.	162	*Voice Class I	1
Mus.	363	Vocal Methods			**Inst. Tech	1
					***Performing Org.	0
						8

6TH SEMESTER: 18 s.h.

		Gen. Ed. requirements	Mus.	252	His. & Lit. of Mus. IV	3
		or Electives	Mus.	366	Conducting II	2
Ed.	427	Except. in Reg. Clsrn.			Applied Music	1
Mus.	334	Jr. High & Sec. Mus.	Mus.	163	*Voice Class II	1
		Methods			***Performing Org.	0
Mus.	362	Instr. Methods				7
						11

7TH SEMESTER (or 8TH): 15 or 16 s.h.

Gen. Ed. requirements	Mus.	367	Orchestration	2
or Electives			Applied Music	1
			***Performing Org.	0-1
				3-4

8TH SEMESTER (or 7TH): 12 s.h.

Ed.	432	Student Teaching	12
			12

Total credits required for graduation: 130-131.

*Students whose applied field of performance is Voice or Piano will substitute an approved music elective.

**Five out of seven Instrumental Techniques (Mus. 261-267) are the minimum requirement. Each family of instruments must be represented in the selection of Instrumental Techniques.

***Participation is required; however, a student may elect a performing organization for 1 credit or no credit. No more than 8 credits can be counted toward the graduation requirement.

SECONDARY EDUCATION

Baccalaureate programs leading to certification in secondary education (7-12) are available in biology, chemistry, communication arts, earth and space science, English, French, general science, German, mathematics, physics, Russian, social studies, and Spanish. Each program is designed to provide students with a thorough foundation in the teaching specialty and with the professional skills needed to work effectively with adolescents in learning environments.

PROGRAM REQUIREMENTS

GENERAL EDUCATION

Secondary education students fulfill the general education requirements by following the distribution noted on page 67. However, within certain majors there may be slight deviations from the pattern presented and a secondary student should check with the departmental office of the discipline in which he is majoring to ascertain any variations.

PROFESSIONAL EDUCATION REQUIREMENTS:

ED	110	Introduction to Education	3
PSY	322	Educational Psychology	3
ED	224	Educational Evaluation	3
ED	225	Multi-Cultural Education	1
ED	226	Basic Teaching Skills	2
ED	227	Classroom Management	3
ED	333	Teaching Reading in the Secondary Content Areas	3
ED	427	Exceptionalities in Regular Classroom	3
SEC.ED. XXX		Methods in	3
SEC.ED. 424		Secondary Student Teaching	12

SECONDARY CERTIFICATION SPECIALIZATION

Secondary education majors may choose areas of specialization from the approved programs below. Curriculum requirements are noted for each area of specialization.

BIOLOGY — 50 Semester Hours

REQUIRED

			c.h.	s.h.
Biol.	153	Introductory Animal Biology	6	4
Biol.	154	Introductory Plant Biology	6	4
Biol.	201	Genetics	5	3
Biol.	202	Environmental Biology	5	3
Biol.	203	Cell Biology	5	3

Chem.	153	General Chemistry I	6	4
Chem.	154	General Chemistry II	6	4
Chem.	254	Introductory Organic Chemistry	6	4
Ed.	332	Biomethods	3	3
Math.	171	Precalculus	4	4
Phy.	251	General Physics I	6	4
Phy.	252	General Physics II	6	4

ELECTIVES (Three required)

Biol.	341	General Microbiology	8	4
Biol.	351	Field Botany	5	3
Biol.	352	Taxonomy of Vascular Plants	5	3
Biol.	353	Ornithology	5	3
Biol.	354	Entomology	5	3
Biol.	356	Field Zoology — Invertebrate	5	3
Biol.	357	Field Zoology — Vertebrate	5	3
Biol.	360	Problems in Biology		1-4
Biol.	400	Special Topics	2	2
Biol.	401	Radiation Biology	5	3
Biol.	420	Vertebrate Biology and Systematics	5	3
Biol.	424	Fresh Water Ichthyology	2	1
Biol.	425	Fisheries Biology	5	3
Biol.	442	Microbial Physiology	6	4
Biol.	443	Virology	3	3
Biol.	444	Immunology	6	4
Biol.	446	Pathogenic Microbiology	6	4
Biol.	451	Animal Physiology	5	3
Biol.	452	Plant Physiology	5	3
Biol.	455	Endocrinology	3	3
Biol.	460	Comparative Vertebrate Morphology	5	3
Biol.	461	Vertebrate Embryology	5	3
Biol.	462	Histology	5	3
Biol.	464	Developmental Biology	5	3
Biol.	470	Animal Ecology	5	3
Biol.	471	Plant Ecology	5	3
Biol.	472	Parasitology	5	3
Biol.	478	Biome Studies	3	3
Biol.	490	Evolution and Population Genetics	3	3
Biol.	491	Biogeography	3	3
Biol.	492	Ethology	5	3
Chem.	453	Biochemistry	6	4
Geog.	254	Conservation of Natural Resources	3	3

Mathematics 151 and 152 may be substituted for 171. In meeting general education requirements (see page 67), the distribution in Natural Sciences and Mathematics may be met with supplemental courses from the field of specialization. Students should note that no more than one non-laboratory elective may be included in credits for the major.

CHEMISTRY — 30 Semester Hours

REQUIRED

Chem.	151	Chemical Principles I	4	4
*Chem.	161	Chemical Principles Lab I	3	1
Chem.	152	Chemical Principles II	4	4
*Chem.	162	Chemical Principles Lab II	3	1

Chem.	251	Organic Chemistry	3	3
*Chem.	261	Organic Chemistry Lab II	3	1
Chem.	252	Organic Chemistry II	3	3
Chem.	257	Spectroscopic Identification of Organic Compounds	3	2
*Chem.	262	Organic Chemistry Lab II	3	1
		Electives numbered 300 or above		9
Chem.	270	Chemical Information	1	1

ELECTIVES

Chem.	352	Techniques and Instruments I	8	4
Chem.	354	Physical Chemistry I	3	3
Chem.	355	Physical Chemistry II	3	3
Chem.	356	Techniques and Instruments II	6	2
Chem.	357	Techniques and Instruments III	5	3
Chem.	359	Advanced Organic Chemistry	3	3
Chem.	453	Biochemistry	3	3
*Chem.	463	Biochemistry Laboratory	3	1
Chem.	455	Advanced Physical Chemistry	3	3
Chem.	456	Advanced Inorganic Chemistry	3	3
Chem.	459	Demonstrations in Chemistry	5	3
Chem.	460	Radiochemistry Techniques	4	2
Chem.	461	Techniques and Instruments IV	4	2
Chem.	465, 466	Chemistry Research	1	3
Chem.	470	Chemistry Literature and Seminar	1	3
Chem.	471	Special Topics in Chemistry	3	3
Chem.	485	Problems in Chemical Education	1	3
Phy.	353/363	Atomic Physics	6	4

*These laboratories must be taken concurrently with the lecture course.

ADDITIONAL REQUIREMENTS

Math	171	Precalculus	4	4
Math	172	Calculus with Analytical Geometry I	4	4
Math	271	Calculus with Analytical Geometry II	4	4
		and either		
Phy.	251	General Physics I	6	4
Phy.	252	General Physics II	6	4
		or		
Phy.	258	Introductory Physics Lecture I	5	4
Phy.	268	Introductory Physics Laboratory I	3	1
Phy.	259	Introductory Physics Lecture II	5	4
Phy.	269	Introductory Physics Laboratory II	3	1

Students who have taken Chemistry 153 and 154 may be permitted, upon consideration of their performance, to substitute these courses for Chemistry 151 and 152. A total of 30 semester hours in chemistry must be taken.

COMMUNICATION ARTS — 42 Semester Hours

The Communication Arts program represents a new concept in the preparation of prospective teachers of communication-related subjects. It is designed to equip the teacher with the ability to help students make meaning out of their experience through the uses of language and all

those behaviors, verbal and nonverbal, associated with the uses of language. The candidate may develop a program that meets his special needs and interests as a potential teacher of English, speech, drama, and other communication subjects. Successful completion of the program leads to the communication certification.

CORE:

I. PROFESSIONAL ORIENTATION — 6 credits

Ed.	110	Intro. to Education
Psy.	322	Educational Psychology

II. PRE-PROFESSIONAL — 15 credits

Ed.	227	Classroom Management
Ed.	226	Basic Teaching Skills
Ed.	224	Educational Evaluation
Ed.	225	Multi-Cultural Education
Ed.	427	Exceptionalities in the Regular Classroom
Ed.	333	Teaching Reading in the Secondary Content Areas

III. COMMUNICATION ARTS SPECIALIZATION — 42 credits

A. Required Core — 18 credits

Eng.	200	Composition and Literature
Eng.	221 or 222	English Literature Survey
Eng.	252	Intro. to the English Language
SCT	200	Interpersonal Communication Theory
SCT	154	Introductory Interpretation
		or
SCT	253	Introduction to the Theater
SCT	251	Voice and Articulation

B. Concentration — 24 credits

24 hours in either literature or speech; or 12 hours in each of two: speech, theater, composition, literature, media, or linguistics.

IV. PROFESSIONAL CORE — 15 credits

Ed.	328	Methods in Communication Arts
Ed.	424	Secondary Student Teaching

V. ELECTIVES — 2 credits

EARTH AND SPACE SCIENCE — 51 Semester Hours

REQUIRED

			c h.	s. h.
E.S.	150	Physical Geology	3	3
E.S.	200	Solar Astronomy	3	3
E.S.	250	Historical Geology	3	3
E.S.	270	Oceanography	3	3
E.S.	280	Meteorology	3	3
Geog.	125	Map Interpretation	3	3
Biol.	153	Introductory Animal Biology	6	4
Biol.	154	Introductory Plant Biology	6	4

Chem.	153	General Chemistry I	3	3
Chem.	163	General Chemistry Lab I	3	1
Chem.	154	General Chemistry II	3	3
Chem.	164	General Chemistry Lab II	3	1
Phy.	251	General Physics I	6	4
Phy.	252	General Physics II	6	4

ELECTIVES

E.S.	201	Stellar Astronomy	3	3
E.S.	255	Land Forms	3	3
E.S.	350	Structural Geology	3	3
E.S.	355	Invertebrate Paleontology	3	3
E.S.	360	Mineralogy (Minerals)	3	3
E.S.	370	Petrology (Rocks)	3	3
E.S.	375	Sedimentation and Stratigraphy	3	3
E.S.	385	Climatology	3	3
Geog.	225	Cartography I	5	3
Geog.	325	Cartography II	5	3
Geog.	400	Aerial Photo Interpretation	4	3

In satisfying the general education distribution, page 67, it is recommended that Earth and Space majors schedule Mathematics 171.

For a concentration in geology, students should elect courses from:

E.S.	255: Landforms	E.S.	360: Mineralogy (Minerals)
E.S.	260: Environmental Geology	E.S.	370: Petrology (Rocks)
E.S.	350: Structural Geology	E.S.	375: Sedimentation and Stratigraphy
E.S.	355: Invertebrate Paleontology		

For a concentration in astronomy-planetarium operation, students will elect the following:

E.S.	201: Stellar Astronomy	Co-Op	306: Internship Planetarium
Sci. Ed.	485: Planetarium Operation & Management	Comm.	102: Introduction to Images

For a broad field of Earth Science, select any course with an E.S. number except E.S. 111.

ENGLISH — 42 Semester Hours

REQUIRED (24 credits hours)

			c.h.	s.h.
Eng.	200	Composition and Literature	3	3
Eng.	201	Advanced Composition	3	3
Eng.	221	English Literature: Beginning to 1800	3	3
Eng.	222	English Literature: 1800 to the Present	3	3
Eng.	252	Introduction to the English Language	3	3
Eng.	253	English Grammar and Usage	3	3
✗ Eng.	320	Studies in 19th Century American Fiction	3	3
✗ Eng.	322	Studies in 20th Century American Fiction	3	3

ELECTIVES (18 credit hours, 12 of which must be taken on the 300 and 400 levels)

Eng.	172	Introduction to Film as Literature	3	3
Eng.	202	Beginning Creative Writing	3	3
Eng.	203	The Craft of Fiction	3	3

Eng	204	The Craft of Poetry	3	3
Eng.	206	Business Writing	3	3
Eng.	209	Special Topics in Literature	3	3
Eng	210	The Modes of Literature	3	3
Eng	230	Contemporary Black American Literature — 1910 to Present	3	3
Comm.	250	Journalism	3	3
Eng	250	Studies in Western Mythology	3	3
Eng	270	Training for Writing Center Tutors	1	1
Eng.	303	Sixteenth Century Prose and Poetry	3	3
Eng	305	Studies in Seventeenth Century English Literature ...	3	3
Eng	307	Studies in Eighteenth Century English Literature	3	3
Eng	311	Studies in Nineteenth Century English Literature	3	3
Eng.	332	Nineteenth Century British Novel	3	3
Eng.	333	Twentieth Century British Novel	3	3
Eng	339	Short Fiction of the Twentieth Century	3	3
Eng	341	Twentieth Century Poetry	3	3
Eng.	343	Modern Drama	3	3
Eng	345	English Drama	3	3
Eng.	355	Topics in Literary Theory	3	3
Eng.	365	Images of Women in Literature	3	3
Eng.	372	Narrative Genres in Film	3	3
Eng.	385	American Poetry to 1900	3	3
Eng.	401	Chaucer	3	3
Eng	412	Shakespeare: Comedies and Histories	3	3
Eng	413	Shakespeare: Tragedies and Romances	3	3
Eng.	441	Writers in Revolt: English Romanticism	3	3
Eng.	456	English Honors Seminar	3	3
Eng.	457	Introduction to Linguistics	3	3
Eng.	458	History of the English Language	3	3
Eng.	460	Independent Study		1-6
Eng.	461	Writers' Workshop	3	3

READING SUPPLEMENT — 3 hours from Ed. 221, 333, or 426.

FRENCH — 30 Semester Hours

REQUIRED

			c.h.	s.h.
*Fr	251	Intermediate French I	3	3
*Fr.	252	Intermediate French II	3	3
Fr.	255	French Civilization I	3	3

*May be omitted upon demonstration of proficiency at second year level.

Fr.	256	French Civilization II	3	3
Fr	351	Advanced Grammar & Composition	3	3

ELECTIVES

Fr	253	Commercial French	3	3
Fr.	260	The French Short Story	3	3
Fr.	353	The Modern French Drama	3	3
Fr	354	The Modern French Novel	3	3
Fr	355	French Romanticism	3	3
Fr	356	French Poetry from Baudelaire to Surrealism	3	3
Fr.	357	The French Realistic Novel	3	3
Fr	358	The Literature of the Age of Enlightenment	3	3
Fr.	359	The Literature of the Classical Age	3	3
Fr	451	Supervised Readings in French Literature	3	3

Students participating in foreign study programs must complete at least six hours of French literature at Clarion, regardless of the number of credits earned abroad.

GENERAL SCIENCE — 42 Semester Hours

A program specifically designed to prepare students to teach science at the junior high or middle school level. General Science majors are not prepared to teach specialized high school courses such as biology, chemistry, physics, or earth science. Likewise, a biology, chemistry, or physics major is not prepared to teach General Science unless his college program is broadened to include all of the required science courses of the General Science curriculum. A student who desires to teach only specialized courses should major in the specific subject area.

REQUIRED

			c.h.	s.h.
Biol.	153	Introductory Animal Biology	6	4
Biol.	154	Introductory Plant Biology	6	4
Chem.	153	General Chemistry I	6	4
Chem.	163	General Chemistry Laboratory I	3	1
Chem.	154	General Chemistry II	6	4
Chem.	164	General Chemistry Laboratory II	3	1
*Phy.	251	General Physics I	6	4
*Phy.	252	General Physics II	6	4
E.S.	252	Physical Geology	3	3
E.S.	351	Meteorology	3	3
E.S.	200	Solar Astronomy	3	3
Sci. Ed.	460	Science Curriculum in the Middle and Junior High School	3	3

Three (3) additional science courses will be needed to give a minimum of 42 credits. Students, with advisement, may elect courses from one field only, or courses may be distributed among biology, chemistry, or physics.

Since General Science is an interdisciplinary major, students must maintain a quality point average of 2.00 in each of the following fields: physics, chemistry, biology, and earth science.

A biology, chemistry, or physics major will be recommended for Instructional I certificate in General Science only if his program of courses has included, satisfactorily, all the basic courses in the General Science curriculum.

*Mathematics 171 is a prerequisite. Mathematics 151 and 152 may be substituted for 171. Majors in General Science should not include Biology 111, Mathematics 112, Physical Science 111 and 112, and Earth Science 111 in their general education programs (see page 67). Mathematics 171 or 151 and 152 should be elected.

GERMAN — 30 Semester Hours

REQUIRED

			c.h.	s.h.
**Ger.	251	Intermediate German I	3	3
**Ger.	252	Intermediate German II	3	3
Ger.	255	Germanic Civilization I	3	3
Ger.	256	Germanic Civilization II	3	3
Ger.	351	Advanced Grammar & Composition	3	3

**May be omitted upon demonstration of proficiency at second year level.

ELECTIVES

Ger.	253	Scientific German	3	3
Ger.	254	Commercial German	3	3
Ger.	260	The German Short Story	3	3
Ger.	350	Advanced Conversation and Interpretation	3	3
Ger.	352	Survey of German Literature through the Classical Age	3	3
Ger.	353	The Modern German Drama	3	3
Ger.	355	German Romanticism	3	3
Ger.	358	Classical German Literature: Goethe, Schiller & Lessing	3	3
Ger.	360	Contemporary German Prose	3	3
Ger.	361	German Lyric Poetry	3	3
Ger.	451	Supervised Readings in German Literature	3	3

Students participating in foreign study programs must complete at least six hours of German literature at Clarion, regardless of the number of credits earned abroad.

MATHEMATICS — 34 Semester Hours

REQUIRED

			c.h.	s.h.
Math.	270	Calculus with Analytic Geometry I	4	4
Math.	271	Calculus with Analytic Geometry II	4	4
Math.	272	Calculus with Analytic Geometry III	4	4
Math.	451	Modern Algebra I	3	3
Math.	452	Modern Algebra II	3	3

ELECTIVES

Math.	350	Ordinary Differential Equations	3	3
Math.	455	Probability	3	3
Math.	357	Modern Geometry	3	3
Math.	360	Numerical Methods in Mathematics I	3	3
Math.	460	Numerical Methods in Mathematics II	3	3
Math.	369	Boolean Algebra	3	3
Math.	370	Introduction to Linear Algebra	3	3
Math.	454	Theory of Numbers	3	3
Math.	456	Mathematical Statistics	3	3
Math.	471	Advanced Calculus I	3	3
Math.	472	Advanced Calculus II	3	3

Math.	473	Elementary Topology	3	3
Math.	480	Topics	3	3
Math.	499	Independent Study	1-3	1-3

Majors should select Physics 258 and/or Chemistry 151 or 153 instead of Basic Physical Science 111-112.

Concurrent certification in Physics is possible with the election of Phy. 258, 259, 351, 352, 353, 354 and 370 or 453. Students admitted into both programs should substitute Ed. 324 or 335.

PHYSICS — 30 Semester Hours

REQUIRED

			c.h.	s.h.
Phy.	258	Introductory Physics Lecture I	5	4
*Phy.	268	Introductory Physics Laboratory I	3	1
Phy.	259	Introductory Physics Lecture II	5	4
*Phy.	269	Introductory Physics Laboratory II	3	1
Phy.	351	Mechanics: Dynamics	3	3
Phy.	352	Electricity and Magnetism	3	3
Phy.	353	Modern Physics I.....	3	3
Phy.	354	Optics	3	3
**Phy.	370	Experimental Physics	6-9	4

ELECTIVES

Phy.	350	Mechanics: Statics	3	3
Phy.	355	Modern Physics II	3	3
Phy.	356	Thermodynamics	3	3
Phy.	357	Intro. to Theory of the Solid State	3	3
Phy.	453	Independent Study in Physical Measurements		2-6
Phy.	455	Electronics.....	5	3
Phy.	457	Demonstrations in Physics	5	3
Phy.	460	Intro. to Math. Physics.....	3	3
Phy.	461	Seminar	1	1

ADDITIONAL REQUIREMENTS

Chem.	153	General Chemistry I	3	3
*Chem.	163	General Chemistry Laboratory I	3	1
Chem.	154	General Chemistry II	3	3
*Chem.	164	General Chemistry Laboratory II	3	1
Math.	172	Calculus With Analytic Geometry I	4	4
Math.	271	Calculus With Analytic Geometry II	4	4
Math.	272	Calculus With Analytic Geometry III	4	4
Math.	350	Ordinary Differential Equations	3	3

Concurrent certification in Mathematics is possible with the election of Math 451, 452, and an approved Mathematics elective. Students admitted into both programs should take Phy. 460 as their Physics elective and substitute Ed. 336 for Ed. 334.

*These laboratories must be taken concurrently with lecture courses.

**Physics majors should schedule twice, for 2 credits each.

RUSSIAN — 30 Semester Hours

REQUIRED

			c.h.	s.h.
Russ.	251	Intermediate Russian I	3	3
Russ.	252	Intermediate Russian II	3	3
Russ.	255	Russian Civilization I	3	3
Russ.	256	Russian Civilization II	3	3
Russ.	351	Advanced Grammar & Composition	3	3

ELECTIVES

Russ.	253	Scientific Russian	3	3
Russ.	352	Introduction to Russian Literature	3	3
Russ.	353	The Russian Drama	3	3
Russ.	354	The Russian Novel	3	3
Russ.	355	Readings in Soviet Russian Literature	3	3
Russ.	361	Dostoevsky	3	3
Russ.	451	Supervised Readings in Russian	3	3

Students participating in Russian studies during summer in the USSR or Europe must have 2 years of Russian and at least one course in Russian Literature and Culture.

SOCIAL STUDIES — 48 Semester Hours

Selection must include courses in all seven of the following fields: anthropology, economics, geography, history, political science, psychology, and sociology.

REQUIRED COMPONENTS

	s.h.
American Culture	6
Behavioral Sciences	6
Economics	6
World Culture	6
Social Science Electives	6

A list of courses satisfying the above requirements may be obtained from the coordinator of the Social Studies program.

DISCIPLINE CONCENTRATION

The student must choose 18 hours of course work in one area: anthropology, economics, geography, history, political science, or sociology. Specific course listings may be located under the respective department. With authorization of the Social Studies coordinator, students can develop a behavioral science concentration.

ANTHROPOLOGY

Anth. 213, 214, 250, 251, 353, 354, 356, 357, 358, 359, 360, 361, 362, 400, 401, 402.

ECONOMICS

Econ. 220, 310, 311, 312, 340, 341, 351, 361, 370, 371, 410, 453, 470, 490.

GEOGRAPHY

Geog. 115, 125, 225, 250, 255, 258, 260, 265, 275, 300, 325, 385, 400, 450.

HISTORY

Hist. 111, 210, 215, 254, 255, 256, 310, 311, 320, 330, 335, 340, 345, 354, 355, 356, 357, 358, 359, 361, 362, 365, 366, 370, 375, 376, 385, 400, 439, 440, 452, 453, 454, 456, 457, 458, 461, 462, 463, 467, 471.

POLITICAL SCIENCE

P.S. 210, 351, 352, 353, 354, 355, 365, 366, 375, 451, 452, 458.

PSYCHOLOGY

Psy. 225, 230, 251, 260, 331, 340, 350, 354, 360, 452, 454, 455, 456, 458, 459, 464.

SOCIOLOGY

Soc. 300, 321, 351, 352, 361, 362, 363, 370, 380, 395; Social Work 311, 312.

SPANISH — 30 Semester Hours

REQUIRED

		c.h.	s.h.
*Span.	251	Intermediate Spanish I	3 3
*Span.	252	Intermediate Spanish II	3 3
Span.	255	Hispanic Civilization I	3 3
Span.	256	Hispanic Civilization II	3 3
Span.	351	Advanced Grammar & Composition	3 3

* May be omitted upon demonstration of proficiency at second year level.

ELECTIVES

Span.	253	Commercial Spanish	3 3
Span.	350	Advanced Conversation & Composition	3 3
Span.	352	Introduction to Spanish Literature	3 3
Span.	353	The Modern Spanish Drama	3 3
Span.	354	The Modern Spanish Novel	3 3
Span.	355	The "Generation of 1898"	3 3
Span.	359	The Literature of the Golden Age	3 3
Span.	360	Survey of Spanish American Literature	3 3
Span.	361	The History of Mexican Literature	3 3
Span.	451	Supervised Readings in Hispanic Literature	3 3

Students participating in foreign study programs must complete at least six hours of Spanish or Spanish-American literature at Clarion, regardless of the number of credits earned abroad.

DEPARTMENT OF SPECIAL EDUCATION

Louis E. Gurecka, M.S., Chair

Professors: Kern, Schreffler, Shirey, Vayda; *Associate Professors:* Dunkle, Huwar, A. Stramiello; *Assistant Professors:* Gurecka, K. Smith; *Part-Time Instructors:* Rexford, M. Stramiello

The Special Education curriculum is a competency-based program which has identified specific professional competencies regarded as essential for performance as a diagnostic/prescriptive teacher of children who have special needs. Some of these competencies are required through the use of instructional modules which detail the objective(s) to be achieved and identify the instructional materials and processes which the student may employ. The instructional modules are in the form of learning packets, or self-directed study guides, which the student may use independent of the university instructor and/or classroom. They have the characteristic of individualization, making it possible for students to proceed at their own pace according to individual abilities and initiative.

Human relations skills-training is presented through a series of sensitizing exercises which focus upon fundamental social interactions among teachers, students, administrators, and parents. These crucial teaching attitudes and behavioral skills are deliberately planned instead of being left to chance.

Training in the clinical skills of diagnosis of learning difficulties in children is conducted with individuals who come to the Special Education Department's educational appraisal clinic for intensive study. Prior to such specialized training, students engage in a wide spectrum of field experiences observing and interacting with exceptional children in school and community program settings.

Student teaching is the culminating field experience, conducted during the senior year which may be done in a team setting. All student teachers will have at least two varied experiences, either with two types of exceptionalities, or with one regular elementary class and one special education setting.

Professional Education and Area of Specialization

Ed.	110	Introduction to Education	3
Psy.	260	Developmental Psychology	3
Psy.	322	Educational Psychology	3
El. Ed.	323	Teaching of Reading	3
El. Ed.	324	Teaching of Math	3
SPA	457	Dev. Seq. of Language/Speech	3
Sp. Ed.	210	Human Exceptionalities	3
Sp. Ed.	215	Human Relations Skills	2
Sp. Ed.	220	Nature of Mental Retardation	3
Sp. Ed.	225	Early Field Experience	1
Sp. Ed.	240	The Physically Handicapped	3
Sp. Ed.	305	Specific Learning Disabilities	3

Sp. Ed.	310	Socially and Emotionally Disturbed	3
Sp. Ed.	445	Career Education	2
Sp. Ed.	410	Educational Appraisal	4
Sp. Ed.	415	ID & S for M/MH	6
Sp. Ed.	420	ID & S for S/PM	6
Sp. Ed.	425	Behavior Management	3
Sp. Ed.	450	Student Teaching	12
RELATED ELECTIVES			11

NOTE: General Education requirements are listed on page 67.



TYPICAL PROGRAM FOR SPECIAL EDUCATION MAJORS

FIRST YEAR — 32 Semester Hours

Eng.	111	English Composition ... 3	s.h.				
HPE	111	Health Education 2		HPE		Activity	1
Sp. Ed	210	Human				General Education	
		Exceptionalities 3				Requirements or	
						Electives.....	23

SECOND YEAR — 32 Semester Hours

Psy.	111	General Psychology ... 3		SPA	457	Developmental	
Sp. Ed.	215	Human Relations				Sequences of	
		Skills..... 2				Language & Speech.. 3	
Sp. Ed.	225	Early Field Experience.. 1		Sp. Ed.	240	The Physically	
Ed.	110	Intro. to Education 3				Handicapped	3
HPE		Activity	1	Psy.	260	Developmental	
Sp. Ed.	220	Nature of Mental				Psychology	3
		Retardation	3	Psy.	322	Educational	
						Psychology	3
						General Education	
						Requirements or	
						Electives.....	7

THIRD YEAR — 33 Semester Hours

5th Semester

El. Ed.	323	Teaching of Reading ... 3
El. Ed.	324	Teaching of Elem. School Math..... 3
Sp. Ed.	305	Specific Learning Disabilities
		General Electives

6th or 7th Semester

Sp. Ed.	410	Educational Appraisal & Prescription I
		General
		Requirements

FOURTH YEAR — 31 Semester Hours

7th or 6th Semester

Sp. Ed	415	Instruc. Dev. & Strategies M/MH.... 6
Sp. Ed	420	Instruc. Dev. & Strategies P/SH.... 6
Sp. Ed.	425	Behavior Mgmt. 3
Sp. Ed.	445	Career Education

8th Semester

Sp. Ed.	422	Professional Practicum.. 2
Sp. Ed.	450	Student Teaching 12

DUAL CERTIFICATION

Elementary Education and Special Education

FIRST SEMESTER

Ed.	110	Intro. to Education 3
Eng.	111	English Composition ... 3
Biol.	111	Basic Biol. Sci. 4
Sp. Ed.	210	Human Except. 3
		Human. Elective
		<u>16</u>

SECOND SEMESTER

Sp. Ed.	220	Nature of M.R. 3
E.Ch.	321	Childhood Dev. 3
Sp.	113	Fund. of Speech
		Non-Western Culture ... 3
Hum.	120 or 121	..... 3
Sp. Ed.	215	Human Rel. Skills Trng. ... 2
		<u>17</u>

THIRD SEMESTER

Ph. Sci.	111	Basic Physical Science: Chemistry	3
HPE	111	Health Education	2
Math	111	Basic Math for Elem. Teachers	3
E.S.	111	Basic Earth Science	3
Sp. Ed.	225	Early Field Experience ..	1
Sp. Ed.	240	Physically Handi.....	3
			<u>15</u>

FOURTH SEMESTER

Math	211	Modern Concepts of Math for El. Tchrs	3
Psy.	322	Educational Psych	3
Ph. Sci.	112	Basic Physical Sci.	3
Ed.	224	Educational Eval.....	3
HPE		Activity	1
Sp. Ed.	305	Specific Learning Disabilities.....	3
			<u>16</u>

FIFTH SEMESTER

Eng.	252	Intro. to Eng. Lang.	3
Ed.	226	Basic Teaching Skills ...	2
Mus.	131	Fund. of Music	3
P.S.	211	American Govt.	3
Sp. Ed.	310	Socially and Emotionally Disturbed	3
Hist.	213	Hist. of the U.S.	3
			<u>17</u>

SIXTH SEMESTER

El. Ed.	323	Teaching of Reading ...	3
El. Ed.	324	Tchng Elem. School Math	3
El. Ed.	331	Children's Lit.	3
El. Ed.	330	Communication Arts ...	2
Mus.	132	Basic Music Methods ..	3
HPE	223	Physical Education for Elem. Majors.....	1
SPA	455	Speech Corr. for the Classroom Tch. ...	3
			<u>18</u>

SEVENTH SEMESTER

El. Ed.	325	Tchng. of Elem. School Social Studies	3
El. Ed.	326	Reading Problems in Elem. School	3
Sci. Ed.	322	Tchng. of Elem. Sci.	3
Art	190	Art in the Elem. Grade..	3
HPE	323	Mod. Curr. — HPE	1
Sp. Ed.	410	Educational Appraisal I..	4
			<u>17</u>

EIGHTH SEMESTER

Sp. Ed.	415	ID & S for M/MH	6
Sp. Ed.	420	ID & S for S/PM	6
Sp. Ed.	425	Behav. Mgmt/Sp. Ed. Settings	3
Sp. Ed.	445	Career Education	2
			<u>17</u>

NINTH SEMESTER

El. Ed.	424	Elem. Student Tchng ...	6
Sp. Ed.	450	Student Teaching	6
			<u>12</u>

B.S. DEGREE IN HABILITATIVE SCIENCES

Clarion University of Pennsylvania has developed a program to serve a new evolving technology designed to provide meaningful human services to various groups of persons who have specialized needs such as those who are developmentally disabled, aging, troubled youth, and alcohol/drug-abusers. This program prepares persons to be competent in this technology of individual client service planning and implementation. These professionals are knowledgeable about the needs of the client-groups and the fundamental concepts of service-delivery at the

personal or caring level as well as at the program level. They are skilled at the entry-level in relevant career activities of client-programming/therapy and are prepared to be considered for supervisory/consultative roles as program specialists.

PROGRAM REQUIREMENTS

AREA OF SPECIALIZATION

I. Habilitative Science Core — 41 credits

Sp. Ed.	210	Human Exceptionalities	3
Sp. Ed.	215	Human Relations Skills Training	2
Sp. Ed.	225	Early Field Experience	1
Sp. Ed.	240	The Physically Handicapped	3
Sp. Ed.	310	Socially and Emotionally Disturbed	3
Sp. Ed.	425	Behavior Management	3
Psy.	464	Intro. to Clinical Psychology	3
H.S.	460	Models of Delivery Systems	3
H.S.	470	Therapeutic & Residential Svc Programs	6
BusEd	151	Financial Accounting	3
Psy.	354	Abnormal Psychology	3
SocWk	311	Principles of Social Work	3
SocWk	312	Social Work with Groups	3
HPE	317	First Aid and Safety	2

II. Areas of Concentration (select one or more)

A. Developmentally Disabled — 39 credits

Sp. Ed.	220	Nature of Mental Retardation	3
Sp. Ed.	415	ID & S M/MH	6
Sp. Ed.	420	ID & S S/PM	6
H.S.	465	Assessment of Adaptive Behavior and Vocational Potential	3
Psy.	260	Developmental Psychology	3
HPE	310	Adapted Physical Education	5
H.S.	495	Field Exp. with Develop. Disab.	15

B. Substance Abuse — 33 credits

Sp. Ed.	305	Specific Learning Disabilities	3
H.S.	405	Substance Abuse	3
H.S.	465	Assess. Adapt. Beh./Voc. Potential	3
Psy.	321	Psychology of Adolescence	3
Soc.	351	Contemporary Social Problems	3
G.S.	242	You and The Law	3
H.S.	495	Field Experience in Area of Substance Ab.	15

C. Gerontology — 33 credits

Sp. Ed.	220	Nature of Mental Retardation	3
Sp. Ed.	305	Specific Learning Disabilities	3
H.S.	405	Substance Abuse	3
Psy.	457	Psychology of Adult Dev/Aging	3
Soc.	351	Contemporary Social Problems	3
Soc.	352	The Family	3
H.S.	495	Field Experience with Elderly	15

III. Electives — 0-6 credits

Students should select one of the three areas of concentration.

NOTE: General Education requirements are listed on page 67.

SPECIAL EDUCATION AND HABILITATIVE SCIENCES DUAL EMPHASIS

By taking a dual emphasis in Special Education and Habilitative Sciences, students will gain expertise to serve in schools and with community agencies. In addition to the general education requirements for all students, the following three areas and one area of concentration will constitute the program.

AREA OF SPECIALIZATION

1. Special Education — 49 credits

Sp. Ed.	210	Human Exceptionalities	3
Sp. Ed.	215	Human Relation Skills Training	2
Sp. Ed.	220	Nature of Mental Retardation	3
Sp. Ed.	225	Early Field Experience	1
Sp. Ed.	240	The Physically Handicapped	3
Sp. Ed.	305	Specific Learning Disabilities	3
Sp. Ed.	310	Socially and Emotionally Disturbed	3
Sp. Ed.	410	Educational Appraisal I	4
Sp. Ed.	415	ID & S for M/M Handicapped	6
Sp. Ed.	420	ID & S for S/P Multihandicapped	6
Sp. Ed.	425	Behavior Management in Sp. Ed. Settings	3
Sp. Ed.	450	Student Teaching	6

2. Habilitative Sciences — 20 credits

H.S.	460	Models of Hum. Svcs. Del. Sys.	3
H.S.	470	Therapeutic/Residential Svc. Programs	6
BusEd	151	Financial Accounting	3
SocWk	311	Principles of Social Work	3
SocWk	312	Social Work with Groups	3
HPE	317	First Aid and Safety	2

3. Professional Education — 15 credits

Ed.	110	Introduction to Education	3
Psy.	322	Educational Psychology	3
El. Ed.	323	Teaching of Reading	3
El. Ed.	324	Teaching Elementary School Math	3
SPA	457	Developmental Sequences Lang/Sp.	3

AREAS OF CONCENTRATION (select 1 or more)

4. Developmentally Disabled — 13 credits

H.S.	465	Assessment of Adaptive Behavior	3
HPE	310	Adapted Physical Education	3
H.S.	495	Field Exp. w/Dev. Disabled	7

5. Substance Abuse — 13 credits

H.S.	405	Substance Abuse	3
H.S.	465	Assessment of Adaptive Behavior	3
H.S.	495	Field Exp. w/Dev. Disabled	7

6. Gerontology — 13 credits

H.S.	405	Substance Abuse	3
Psy.	457	Psychology of Adult Dev./Aging	3
H.S.	495	Field Experience	7

ELEMENTARY EDUCATION/SPECIAL EDUCATION

With careful planning, students can complete programs leading to certification in both special education and elementary education in 9 semesters or 4 years and a summer, thereby becoming eligible to teach in both regular and special classrooms. The dual certification will also help students to meet the challenges of mainstreaming. In addition, several states are now requiring dual certification to teach handicapped individuals.



DEPARTMENT OF SPEECH PATHOLOGY AND AUDIOLOGY

R. Dennis Hetrick, Chair

Professors: Dininny, Hartley; *Associate Professors:* Hetrick, Keenan, Smith; *Assistant Professors:* McAleer, Simpson

This program, leading to the degree Bachelor of Science in Speech Pathology and Audiology, is designed to prepare students to function with children and adults in school and non-school settings as speech and hearing professionals. Since full professional status requires certification by the American Speech Language and Hearing Association, the program has been designed to provide not only entering competence but a thorough foundation for advanced study, with students selecting either a speech and hearing science or clinical track option.

In addition to the undergraduate program the Department also sponsors a graduate degree program in Speech Pathology and Audiology.

REQUIRED COURSES — CLINICAL TRACK

			c.h.	s.h.
Sp.Ed.	210	Human Exceptionalities	3	3
SPA	450	Speech Science I	3	3
SPA	451	Anatomy of Speech and Hearing Mechanisms	3	3
SPA	452	Speech Pathology I	3	3
SPA	453	Speech Pathology II	3	3
SPA	456	Speech Science II	3	3
SPA	457	Developmental Sequences in Language	3	3
SPA	458	Language Disorders in Children	3	3
SPA	460	Hearing Problems.....	3	3
SPA	463	Speech Reading and Auditory Training	3	3
SPA	468	Speech and Hearing Clinic I: Practicum	7½	3
Ed.	110	Introduction to Education	3	3
El. Ed.	323	Teaching of Reading	3	3
Psy.		Electives	9	9
Eng.	457	Introduction to Linguistics	3	3
Math 221 or Psy.	230	.....	3	3
Ed.	422	Professional Practicum Including School Law	2	2
SPA	422	Student Teaching with Speech and Hearing Handicapped	30	12

NOTE: For General Education requirements in Speech Pathology and Audiology see page 67.

SPEECH PATHOLOGY AND AUDIOLOGY — SEQUENCES OF COURSES — CLINICAL TRACK

1ST SEMESTER

SPA	450	Speech Science I	3	3
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2ND SEMESTER

SPA	456	Speech Science II	3	3
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1ST or 2ND SEMESTER

Sp.Ed.	210	Human Exceptionalities	3	3
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3RD SEMESTER

SPA	452	Speech Pathology I	3	3
SPA	451	Anatomy of Speech and Hearing Mechanisms	3	3

4TH SEMESTER

SPA	457	Developmental Sequences in Language and Speech	3	3
SPA	453	Speech Pathology II	3	3

5TH SEMESTER

SPA	460	Hearing Problems	3	3
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6TH SEMESTER

SPA	463	Speech Reading and Auditory Training	3	3
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5TH or 6TH SEMESTER

SPA	468	Speech and Hearing Clinic I: Practicum	7½	3
SPA	458	Language Disorders in Children	3	3

7TH or 8TH SEMESTER

Ed.	422	Professional Practicum Including School Law	2	2
SPA	422	Student Teaching with Speech and Hearing Handicapped	30	12

REQUIRED COURSES — SPEECH AND HEARING SCIENCE TRACK

Comp. Sci.	101	Computer Science I	3	3
Sp. Ed.	210	Human Exceptionalities	3	3
SPA	450	Speech Science I	3	3
SPA	451	Anatomy of Speech and Hearing Mechanisms	3	3
SPA	452	Speech Pathology I	3	3
SPA	453	Speech Pathology II	3	3
SPA	456	Speech Science II	3	3
SPA	457	Developmental Sequences in Language and Speech	3	3
SPA	458	Language Disorders in Children	3	3
SPA	460	Hearing Problems	3	3
SPA	463	Speech Reading and Auditory Training	3	3
SPA	467	Clinical Observation	3	3
SPA	472	Seminar in Speech Science	3	3
Ed.	110	Introduction to Education	3	3
El. Ed.	323	Teaching Reading	3	3
Psy		Electives	9	9
Phy. Sci.	451	Intro. Elec. for Aud. App.	3	3
Eng	457	Introduction to Linguistics	3	3
Math 221 or Psy	230	.....	3	3

NOTE: For General Education requirements in Speech Pathology and Audiology see page 67.

SPEECH PATHOLOGY AND AUDIOLOGY — SEQUENCE OF COURSES — SPEECH AND HEARING SCIENCE TRACK

1ST SEMESTER

SPA	450	Speech Science I	3	3
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2ND SEMESTER

SPA	456	Speech Science II	3	3
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1ST or 2ND SEMESTER

Sp. Ed.	210	Human Exceptionalities	3	3
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3RD SEMESTER

SPA	451	Anatomy of Speech and Hearing Mechanisms	3	3
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4TH SEMESTER

SPA	457	Developmental Sequences in Language and Speech .	3	3
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5TH SEMESTER

SPA	452	Speech Pathology I	3	3
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6TH SEMESTER

SPA	453	Speech Pathology II	3	3
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7TH SEMESTER

SPA	460	Hearing Problems.....	3	3
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8TH SEMESTER

SPA	463	Speech Reading and Auditory Training	3	3
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7TH or 8TH SEMESTER

SPA	458	Language Disorders in Children	3	3
SPA	467	Clinical Observation	3	3
Eng.	457	Introduction to Linguistics	3	3
SPA	472	Seminar in Speech Science	3	3

COLLEGE OF GRADUATE STUDIES AND CONTINUING EDUCATION

Frank H. Sessions, Ph.D., Dean

Office: Carrier Administration Building, Room 108
Telephone Extension — Continuing Education: 2227
Telephone Extension — Graduate Studies: 2337

GRADUATE DEGREE PROGRAMS

Clarion University of Pennsylvania offers 11 graduate level programs leading to the Master of Arts, Master of Business Administration, Master of Education, Master of Science, or Master of Science in Library Science (accredited by the American Library Association) degrees.

Biology (M.S.)	Mathematics (M.Ed.)
Business (M.B.A.)	Reading Education (M.Ed.)
Communication (M.S.)	Science Education (M.Ed.)
Elementary Education (M.Ed.)	Special Education (M.S.)
English (M.A.)	Speech Pathology and
Library Science (M.S.L.S.)	Audiology (M.S.)

Teacher certificate programs are also available for Instructional Media Specialist, Reading Specialist, and School Supervisor.

For more detailed information on graduate curricula and courses, refer to the Graduate School bulletin.

CONTINUING EDUCATION PROGRAMS

The major thrust of continuing education is to organize and make available to the community the vast resource of instructional talent that resides in the area. Educational programming of all types, presented in almost any format, and developed to meet the needs of a wide variety of audiences, is possible through continuing education.

Generally continuing education activities will fall into one of three program types, non-credit courses, open to the general public without regard to educational background; credit courses offered to meet professional needs; and conferences, a concentrated experience developed for a specific group.

Non-credit courses, as the name implies, do not carry academic credit, do not require admission to the university, do not have examinations or grades. They are mostly conducted on a basic level, thus allowing everyone the opportunity for personal growth. Reasons for pursuing non-credit courses could be for gaining job skills, personal development,

intellectual enrichment or just plain fun.

The fee for each non-credit course is determined largely by the costs involved in presenting the course. This requires that a minimum enrollment be achieved in order for a course to proceed.

Records of each student's participation in non-credit classes will be maintained. The Continuing Education Unit, C.E.U., will be awarded upon successful completion of a course. One C.E.U. represents 10 hours of instruction.

Continuing education programs providing academic credit are generally offered to meet an in-service or professional development educational need of a specific professional group.

Conference activity at Clarion University of Pennsylvania will be aimed at bringing to the campus various occupational, business, fraternal, labor, and professional groups for concentrated day-long, week-long educational activities. The extent to which Clarion faculty is involved in the instructional component will vary with each conference.

The Evening University is offered in cooperation with the Colleges of Business Administration, Arts and Sciences, and Communication. This program, addressed mainly to the adult, provides the means to earn a baccalaureate degree while attending class only after 5:00 p.m. Possible majors are Bachelor of Science in Business Administration with a concentration in Real Estate; Bachelor of Science in General Studies; and Bachelor of Science in Computer Science. The College of Continuing Education provides the means of admission and class registration.

As the educational needs of the area become more apparent through observation, suggestion, and assessment, the College of Continuing Education, in cooperation with the various academic units across the campus, will develop and offer programs intended to meet those needs. A class can take place at any time, at any place, and deal with almost any subject.

COLLEGE OF LIBRARY SCIENCE

Elizabeth A. Rupert, Ph.D., Dean

Office: Carlson Library Building, Room 166

Telephone Extension: 2271

Professors: Gamaluddin, Rupert, Vavrek; *Associate Professors:* Economus, Head, Jetter; *Assistant Professor:* Payne

On December 3, 1937, the State Council of Education approved a curriculum for the education of school librarians at Clarion University.

Library science courses are also offered as electives for Liberal Arts and Business Administration students (see program description for those degree programs), and for elementary majors electing to take their 18 hour concentration in library science.

Besides meeting the state requirements for school librarianship, the library science program at Clarion qualifies students for service in public and special libraries.

Candidates for the B.S. degree in Education who specialize in library science are required to complete 30 semester hours of library science/communication courses. Upon receipt of the degree, the graduate is recommended for certification as a librarian in all grades of the Pennsylvania public schools.

The undergraduate student begins library science courses in the first semester of the freshman year with the course, Introduction to Media Librarianship. A "C" average must be maintained in library science/communication courses and a cumulative "C" average in all courses must be earned to graduate. (Course work more than 6 years old will not be acceptable in meeting certification requirements.) A student planning eventually to work for a master's degree in library science may need a reading knowledge of a modern foreign language and may, therefore, wish to take one of these languages as an undergraduate.

Before being assigned to student teaching, all students specializing in library science must have completed the thirty hours required for the specialization.

The student will find information on scholarship requirements for Teacher Education students on pages 109-111.

A total of 128 semester hours must be completed for the B.S. in Education.

THE CURRICULUM IN LIBRARY SCIENCE EDUCATION

(Certification Program)

(Sequence of courses subject to change for administrative reasons.)

1ST SEMESTER				2ND SEMESTER			
*L.S.	255	Intro. to Media Librarianship	3	L.S.	258	Selection of Library Media	3
L.S.	432	Colloquium	0	CIS	110	Computer Info. Processing	3
				L.S.	432	Colloquium	0
3RD SEMESTER				4TH SEMESTER			
L.S.	257	Basic Information Sources & Serv.	3	*L.S.	358	Media for Children	3
L.S.	357	Organization of Media	3	COMM	440	Media Production Planning.....	3
L.S.	432	Colloquium	0	L.S.	432	Colloquium	0
5TH SEMESTER				6TH SEMESTER			
*L.S.	356	Media for Adolescents	3	L.S.	360	Admin. of School Media Centers	3
L.S.	490	Lib. Mtls. & Services for Except. Students ...	3	L.S.	459	Media, Methods and the Curriculum.....	3
L.S.	432	Colloquium	0	L.S.	432	Colloquium	0
7TH SEMESTER				8TH SEMESTER			
Ed.	422	Prof. Prac. & School Law	2	L.S.	432	Colloquium	0
Ed.	423	Lib. Practice	30-12				

Elementary majors electing to take library science as a second major are required to take the professional core the seventh semester.

Library Science majors electing a second major are required to take Ed. 423 — 6 semester hours — and El. Ed. 424 or Ed. 424 — 6 semester hours.

THE CURRICULUM IN LIBRARY SCIENCE EDUCATION CONCENTRATION FOR ELEMENTARY MAJORS

(Not a certification program)

(Sequence of courses subject to change for administrative reasons.)

1ST SEMESTER				2ND SEMESTER			
L.S.	440	Media Production Planning	3	L.S.	257	Basic Information Sources & Serv.....	3
L.S.	258	Selection of Library Media	3	L.S.	432	Colloquium	0
L.S.	432	Colloquium	0				

*Prerequisite: L.S. 258

3RD SEMESTER

*L.S.	356	Media for Adolescents	3
L.S.	357	Organ. of Media	3
L.S.	432	Colloquium	0

4TH SEMESTER

L.S.	360	Admin. of Sch. Media Centers	3
L.S.	459	Media, Methods & Curriculum	3
L.S.	432	Colloquium	0

5TH SEMESTER

L.S.	432	Colloquium	0
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6TH SEMESTER

L.S.	432	Colloquium	0
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7TH SEMESTER

El. Ed.	422	Prof. Prac. & School Law	2
El. Ed.	424	Student Teaching ..	30-12

8TH SEMESTER

L.S.	432	Colloquium	0
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*Prerequisite: L.S. 258

LIBRARY SCIENCE/COMMUNICATION

30 Semester Hours

REQUIRED:

			c.h.	s.h.
L.S.	255	Introduction to Media Librarianship	3	3
L.S.	257	Basic Information Sources and Services	3	3
L.S.	258	Selection of Library Media	3	3
L.S.	356	Media for Adolescents	3	3
L.S.	357	Organization of Media	3	3
L.S.	358	Media for Children	3	3
L.S.	360	Administration of School Media Centers	3	3
L.S.	459	Media, Methods, and the Curriculum	3	3
L.S.	490	Library Mats. & Ser. for Exceptional Students	3	3
L.S.	432	Colloquium	0	0
Comm.	440	Media Production Planning	3	3

ELECTIVE

CIS	110	Computer Info. Processing	3	3
L.S.	455	Special Topics in Librarianship	3	3
L.S.	457	Independent Study/Seminar	1	1
L.S.	260	Development and Administration of Libraries	3	3

The College of Library Science offers a graduate program in Library Science accredited by the American Library Association, preparing personnel for first-level professional positions in public, school, academic, and special libraries. It is recommended that students planning to enter the master's program pursue a broad liberal arts education at the undergraduate level. It would be well to seek counsel from advisors and carefully plan the undergraduate program in order to meet the requirements for entering the Master of Science in Library Science program. For further information regarding the program refer to the bulletin of the College of Library Science.

COOPERATIVE EDUCATION/ INTERNSHIP PROGRAM

College Deans

Co-op study is a general term applied to voluntary service, part time and full time employment, and internship experiences.

Co-op courses (300 level) are based upon job assignments which are related to the student's university major or career objectives and which provide learning experiences as stated in their respective learning objectives. Faculty coordinators from academic departments advise students, review learning objectives, and term reports.

Cooperative education procedures are sufficiently flexible to provide for student and employer needs. The program is designed to enhance self-realization and direction by integrating classroom study with planned and supervised experiences in educational, professional, business, and cultural learning situations outside the formal classroom environment. The joint efforts of faculty, participating employers, and students are directed toward the achievement of an educational experience where classroom studies and appropriate work experience combine to reinforce each other. Prerequisite: junior standing, minimum QPA 2.5, or approval of the appropriate college dean. Offered each semester and summer session.

An internship (400 level) is usually a culminating experience for seniors and graduate students. An intern should have completed most of the required courses in his/her major area of study in order to accept professional level assignments with appropriate supervision. An intern operates in a manner similar to that of a student teacher, with the emphasis upon application of knowledge in a realistic setting rather than acquisition of new material. In other words, an intern is a person with most entry level skills at least partially developed. He/she is expected to render supervised professional services. The length of an internship may be less than a semester or as long as a year. Many internships carry no salary or stipend.

Because internships are tailored to fit the demands of the respective professions as well as the needs of individual students, each college and department is encouraged to establish requirements and criteria for acceptance in the program and for successful completion which go beyond the minimal requirements established by the cooperative education/internship program. Each college through its departments is expected to enforce its own requirements.

Minimally, students must have senior standing and a QPA of at least 2.50 or approval of the department.

CREDIT HOURS for co-op/internship registration carry from 1 to 12 credits as arranged. Any combination of co-op/internship credits earned in excess of 12 semester hours cumulative total will be entered on student records, but will not be counted as credits required for graduation.

GRADING of co-op/internship experiences will carry "Credit/No Record" evaluation of work performance. Individual students may petition to receive a letter grade at the time of registration. This policy does not apply to the Credit/No Record regulation promulgated as part of the university grading system.

CO-OP COURSE NUMBERS

Co-op	301:	Co-op/Anthropology
Co-op	401:	Intern/Anthropology
Co-op	302:	Co-op/Philosophy
Co-op	402:	Intern/Philosophy
Co-op	303:	Co-op/Political Science
Co-op	403:	Intern/Political Science
Co-op	304:	Co-op/Sociology
Co-op	404:	Intern/Sociology
Co-op	305:	Co-op/Social Work
Co-op	405:	Intern/Social Work
Co-op	306:	Co-op/Art
Co-op	406:	Intern/Art
Co-op	308:	Co-op/Biology
Co-op	408:	Intern/Biology
Co-op	309:	Co-op/Environmental Sciences
Co-op	409:	Intern/Environmental Sciences
Co-op	310:	Co-op/Outdoor Education
Co-op	410:	Intern/Outdoor Education
Co-op	311:	Co-op/Science Education
Co-op	411:	Intern/Science Education
Co-op	312:	Co-op/Chemistry
Co-op	412:	Intern/Chemistry
Co-op	313:	Co-op/Communications
Co-op	413:	Intern/Communications
Co-op	314:	Co-op/Advertising
Co-op	414:	Intern/Advertising
Co-op	315:	Co-op/Journalism
Co-op	415:	Intern/Journalism
Co-op	316:	Co-op/Public Relations
Co-op	416:	Intern/Public Relations
Co-op	317:	Co-op/Radio
Co-op	417:	Intern/Radio
Co-op	318:	Co-op/Television
Co-op	418:	Intern/Television
Co-op	319:	Co-op/Computer Science
Co-op	419:	Intern/Computer Science
Co-op	320:	Co-op/Accounting
Co-op	420:	Intern/Accounting
Co-op	321:	Co-op/Business Computers
Co-op	421:	Intern/Business Computers
Co-op	322:	Co-op/Banking
Co-op	422:	Intern/Banking
Co-op	323:	Co-op/Finance
Co-op	423:	Intern/Finance
Co-op	324:	Co-op/Management
Co-op	424:	Intern/Management

Co-op	325:	Co-op/Marketing
Co-op	425:	Intern/Marketing
Co-op	326:	Co-op/Real Estate
Co-op	426:	Intern/Real Estate
Co-op	327:	Co-op/Economics
Co-op	427:	Intern/Economics
Co-op	328:	Co-op/Administration
Co-op	428:	Intern/Administration
Co-op	329:	Co-op/Office Management
Co-op	429:	Intern/Office Management
Co-op	330:	Co-op/Management in Library Science
Co-op	430:	Intern/Management in Library Science
Co-op	332:	Co-op/Early Childhood
Co-op	432:	Intern/Early Childhood
Co-op	333:	Co-op/Elementary Education
Co-op	433:	Intern/Elementary Education
Co-op	334:	Co-op/Secondary Education
Co-op	434:	Intern/Secondary Education
Co-op	335:	Co-op/Education
Co-op	435:	Intern/Education
Co-op	336:	Co-op/English
Co-op	436:	Intern/English
Co-op	337:	Co-op/Writing Center
Co-op	437:	Intern/Writing Center
Co-op	338:	Co-op/Geography
Co-op	438:	Intern/Geography
Co-op	339:	Co-op/Earth Science
Co-op	439:	Intern/Earth Science
Co-op	340:	Co-op/Urban Planning
Co-op	440:	Intern/Urban Planning
Co-op	341:	Co-op/Health and Safety
Co-op	441:	Intern/Health and Safety
Co-op	342:	Co-op/Physical Education
Co-op	442:	Intern/Physical Education
Co-op	343:	Co-op/Recreation
Co-op	443:	Intern/Recreation
Co-op	344:	Co-op/Coaching
Co-op	444:	Intern/Coaching
Co-op	345:	Co-op/Athletic Training
Co-op	445:	Intern/Athletic Training
Co-op	346:	Co-op/Water Safety
Co-op	446:	Intern/Water Safety
Co-op	348:	Co-op/History
Co-op	448:	Intern/History
Co-op	349:	Co-op/Humanities
Co-op	449:	Intern/Humanities
Co-op	350:	Co-op/Library Science
Co-op	450:	Intern/Library Science
Co-op	351:	Co-op/Media
Co-op	451:	Intern/Media
Co-op	352:	Co-op/Mathematics
Co-op	452:	Intern/Mathematics
Co-op	353:	Co-op/Military Science
Co-op	453:	Intern/Military Science
Co-op	355:	Co-op/French
Co-op	455:	Intern/French
Co-op	356:	Co-op/German
Co-op	456:	Intern/German
Co-op	357:	Co-op/Russian
Co-op	457:	Intern/Russian
Co-op	358:	Co-op/Spanish
Co-op	458:	Intern/Spanish
Co-op	360:	Co-op/Music

Co-op	460:	Intern/Music
Co-op	361:	Co-op/Piano
Co-op	461:	Intern/Piano
Co-op	362:	Co-op/Instrumental
Co-op	462:	Intern/Instrumental
Co-op	363:	Co-op/Vocal
Co-op	463:	Intern/Vocal
Co-op	364:	Co-op/Music Marketing
Co-op	464:	Intern/Music Marketing
Co-op	366:	Co-op/Physics
Co-op	466:	Intern/Physics
Co-op	368:	Co-op/Psychology
Co-op	468:	Intern/Psychology
Co-op	369:	Co-op/Counseling
Co-op	469:	Intern/Counseling
Co-op	370:	Co-op/Student Life Services
Co-op	470:	Intern/Student Life Services
Co-op	371:	Co-op/Student Affairs
Co-op	471:	Intern/Student Affairs
Co-op	372:	Co-op/Student Development
Co-op	472:	Intern/Student Development
Co-op	373:	Co-op/Upward Bound
Co-op	473:	Intern/Upward Bound
Co-op	374:	Co-op/Human Relations
Co-op	474:	Intern/Human Relations
Co-op	376:	Co-op/Special Education
Co-op	476:	Intern/Special Education
Co-op	377:	Co-op/Habilitative Sciences
Co-op	477:	Intern/Habilitative Sciences
Co-op	378:	Co-op/Learning Disabilities
Co-op	478:	Intern/Learning Disabilities
Co-op	379:	Co-op/Mental Retardation
Co-op	479:	Intern/Mental Retardation
Co-op	381:	Co-op/Speech Pathology
Co-op	481:	Intern/Speech Pathology
Co-op	382:	Co-op/Audiology
Co-op	482:	Intern/Audiology
Co-op	383:	Co-op/Speech
Co-op	483:	Intern/Speech
Co-op	384:	Co-op/Theatre
Co-op	484:	Intern/Theatre
Co-op	386:	Co-op/Nursing
Co-op	486:	Intern/Nursing
Co-op	387:	Co-op/Medical Technology
Co-op	487:	Intern/Medical Technology
Co-op	389:	Co-op/Continuing Education
Co-op	489:	Intern/Continuing Education
Co-op	390:	Co-op/Academic Services
Co-op	490:	Intern/Academic Services
Co-op	391:	Co-op/Financial Aid
Co-op	491:	Intern/Financial Aid
Co-op	392:	Co-op/Research
Co-op	492:	Intern/Research
Co-op	393:	Co-op/Admissions
Co-op	493:	Intern/Admissions
Co-op	395:	Co-op/Life Experience
Co-op	495:	Intern/Life Experience
Co-op	396:	Co-op/Paralegal
Co-op	496:	Intern/Paralegal

MEDIEVAL AND RENAISSANCE CULTURES AND CONFERENCE

Clarion University holds membership in a consortium of Pennsylvania colleges and universities which sponsor the Conference on Medieval and Renaissance Cultures. Its appeal is to scholars, teachers, students, and all others who have an interest in and an appreciation of the art and culture of the Middle Ages and the Renaissance. The Conference features outstanding scholars and, when possible, performing groups that specialize in the music and drama of the two periods. It is held annually in the early spring on the campus of one of the consortium institutions, the actual location rotating annually among the membership.



MILITARY SCIENCE

Jack D. Moore, LTC, Chair

Offices: Thorn #1 and #2

Telephone: 2292

Professor: LTC Jack D. Moore; *Assistant Professors:* MAJ C. G. Smith, MAJ Gist Wylie, CPT William Fellows, CPT Gregory Tate; *Instructors:* SGM Doford Corker, MSG George Bell, SSG Gregory Besaw, SSG Bobby Josenberger

The Military Science program provides the student an opportunity to learn and practice the art of leadership. Recognizing that there is a great difference in cognition and volition, the program has been structured to give the student actual practical experience in leading, and managing resources — training designed to prepare the student to reach the pinnacle of his or her chosen profession.

The Military Science program enables the student to learn about the military profession and the role it plays in our democratic system of government. The courses enable such knowledge to be acquired on the campus without having to serve in the military forces.

The Military Science curriculum offers students the opportunity to learn and apply management and leadership skills and to participate in such exciting and challenging activities as rappelling, self-defense, orienteering, white-water rafting, and marksmanship. Students may apply to take courses which can lead to a commission as a Second Lieutenant in the Active Army, US Army Reserve, or Army National Guard.

The Military Science electives enrich the student's course of study and count toward graduation requirements. These courses open an additional career option to the student, enabling him or her to gain a commission and serve as an officer in the Regular Army, the Army Reserve, or National Guard while pursuing another chosen career.

REQUIREMENTS FOR ENROLLMENT

Enrollment in the freshman or sophomore Military Science courses (MS 101, 102, 203, 204, 001, 002) is open to all students during their course of study and this enrollment does not obligate the student to any military service or further Military Science courses at Clarion.

Qualified students may be allowed to enroll in the Advanced Military Science Program (MS 305, 306, 407, 408) if academically qualified, with approval of the Professor of Military Science. Those students are eligible to receive a \$100.00 a month subsistence allowance during the academic year if they agree in writing to complete the Advanced Program and

accept a Commission as a Second Lieutenant in the US Army, the Reserve, or the National Guard. Qualified veterans and Junior ROTC graduates may receive exemptions from the Basic courses and enroll immediately in the Advanced Program.

WHAT ROTC MEANS

Equipment and textbooks are issued to enrolled students.

Training in practical skills such as self-defense, cross-country skiing, rappelling, marksmanship, orienteering, first aid techniques, and water safety.

Opportunities in examine the military profession in detail. This includes the Active Army, Army Reserve, and National Guard.

Students successfully completing the Basic course are eligible to apply to enter the Advanced course where they are paid a subsistence allowance of \$100.00 per academic month. Upon completion of the Advanced course and a six-week summer camp, the student is commissioned as a Second Lieutenant. Students may serve in the active Army, Army Reserve, or the National Guard.

THE MILITARY SCIENCE CURRICULUM

The Military Science curriculum is divided into two phases: the Basic course, which includes the first and second academic years, and the Advanced course, which includes the third and fourth academic years. Students enrolled in the ROTC program may count credits in Military Science courses under the Personal Development area of the General Education distribution or as free electives toward their graduation requirements. A minimum of 14 hours of Military Science may be applied toward the 128 required for graduation.

Regular Basic Course

8 Semester Hours

The first four semesters of Military Science constitute the Basic course. Classes meet one hour per week and cover the history and the development of the US Army, its role in the support of national objectives, and studies of topographical maps and terrain analysis. A one hour leadership lab accompanies each class stressing leadership and management skills through such vehicles as rappelling; rafting; marksmanship; orienteering; and other outdoor skills.

MS	101	World Military History	2 credits
MS	102	American Military History	2 credits
MS	203	Fundamentals of Topographic Map Interpretation	2 credits
MS	204	National Security Concepts	2 credits

Advanced Course

The 300 and 400 series courses constitute the Advanced course of instruction for both men and women who desire a commission as a Second Lieutenant in the Active Army, Army Reserve, or the National Guard. This phase is composed of studies in advanced leadership and management, tactics, military law, psychological and social factors which affect human behavior, and modern instructional and training techniques. Practical application is the rule and students have the opportunity to practice and polish their skills.

MS	305	Fundamentals of Organizational Leadership and Modern Learning/Teaching Relationships.....	3 credits
MS	306	Study of Advanced Leadership and the Planning and Executing of Modern Tactical Operations.....	3 credits
MS	407	Management of the Military Complex to Include Fundamentals of Military Law	3 credits
MS	408	Seminar in Analysis and Management	3 credits

LEADERSHIP LABORATORY

A practical experience designed for the attainment and application of leadership principles. Concurrently scheduled in conjunction with all Military Science courses, it provides for articulation of students from the basic experience and development of the individual to the application of responsibilities and professional experience in a meaningful environment.



VENANGO CAMPUS

Thomas J. Rookey, Ed.D., Administrator

ASSOCIATE OF SCIENCE IN BUSINESS ADMINISTRATION

OBJECTIVES

The Associate of Science program has as its principal objective the providing of an opportunity in post-secondary education not found elsewhere within the service area of Clarion University. Students studying in this program may take general business training or specialize in accounting, general business management, office management, or computer processing. If after earning the Associate Degree the student wishes to continue his/her education, he/she may transfer into Clarion's baccalaureate program without loss of credit.

ACADEMIC REQUIREMENT

The program is divided into three blocks of required courses. Half of the program is aimed at developing the general educational level of the student's ability related to working and living in the business environment. The remaining courses are in the field of business and provide the basic and specialized knowledge needed for entry into the business world.

GENERAL EDUCATION:

Eng.	111	English Composition	cr. 3
SCT	113	Fundamentals of Speech	3
Psy.	211	General Psychology	(3)
or			
Soc.	211	Prin. of Sociology	(3)
Econ.	211	Principles of Econ. I	3
HPE	111	Health Education	2
Electives in Science or Humanities			6*
			<hr/> 20

BUSINESS CORE:

The following business courses are required of all students regardless of their area of specialization.

*Office Management students need only 3 credits.

MGMT	120	Introduction to Business	3
Math.	131	Math for Business and Economics I	3
Math.	232	Calculus for Business I	3
CIS	110	Computer Info. Processing	3
ACTG	251, 252	Financial and Managerial Accounting	6
BSAD	240	Legal Environment I	3
Eng.	206	Business Writing	3
Econ.	221	Economic and Business Statistics I	3
			<u>27</u>

BUSINESS ELECTIVES:

Each student will choose an area of specialization. Four areas are available. Requirements are listed below for each area.

ACCOUNTING

ACTG	253	Factory Accounting	3
ACTG	254	Payroll Accounting	3
ACTG	255	Financial Statement Preparation & Analysis	3
ACTG	256	Income Tax Procedures & Forms	3
Business Elective		.....	<u>3</u>
			15

GENERAL BUSINESS MANAGEMENT

MGMT	121	Fundamentals of Management	3
OFMT	221	Office Management	3
BSAD	228	Human Behavior in Organiz.	3
OFMT	227	Applied Supervision	3
Business Elective		.....	<u>3</u>
			15

OFFICE MANAGEMENT

*OFMT	132	Production Typing	3
*OFMT	136	Executive Shorthand	3
MGMT	121	Fundamentals of Management	3
OFMT	221	Office Management	3
OFMT	230	Office Procedures	3
Business Elective		.....	<u>3</u>
			18

COMPUTER PROCESSING

CIS	223	Computer Program — COBOL	3
CIS	224	Data Structure & File Utilization	3
CIS	151	Intro. to FORTRAN	3

Two courses from the following:

CIS	211	Report Program Generator	3
CIS	212	Micro-Mini Computers	3
CIS	152	Advanced FORTRAN	3
CIS	253	Comp. Organiz. & Assembly Lang.	<u>3</u>
			15

*OFMT 132 and 136 require a proficiency level equal to two years of high school typing and shorthand. OFMT 131 and 135 are required for students who do not have this proficiency.

VENANGO CAMPUS

DIVISION OF NURSING

T. Audean Duespohl, Director

Associate Professor: Duespohl; *Assistant Professors:* Amsdell, Gracy, Harrison, Jones, Kavosi, Shiley, Stright

PHILOSOPHY

The philosophy of the Clarion University Nursing Division is consistent with the philosophy of Clarion University in establishing as the Division's primary goal the provision of educational experiences designed to promote scientific inquiry, creative thinking, critical judgment, and self-evaluation. The students' nursing education is complemented by such curriculum offerings as humanities, natural sciences, behavioral sciences, and free electives. The programs are based on the concept of continued self-development so that graduates will aspire to improve and expand their competencies on a continuing basis after graduation.

Nursing is a profession concerned with the delivery of care to individuals and groups of individuals who desire assistance with health maintenance during their life processes. The nursing process is the basis for communication between the nurse, client, and family, who collaborate to achieve maximum health potential. This process includes health teaching by the nurse for the purpose of establishing and maintaining a high level of well-being.

Man is a unified whole who continually interrelates with his environment. Man as a sensing, thinking being makes conscious choices and assumes responsibility for the consequences. Given freedom of choice, man will make decisions regarding his health care needs according to his priorities. He possesses and manifests traits that are greater than but different from the sum of all his parts. Man's family is made up of significant others within his framework of life.

Health, as defined by the client, is the primary focus of nursing care. It is a dynamic, ever-changing state based on man's ability to maintain his optimum level of wellness. A client's concept of health-illness is derived from patterns he has formulated based on his personal experience. Man, as an expert on himself, assumes responsibility for seeking assistance throughout the health-illness continuum. Therefore, he must be consulted concerning his own health goals and participate actively in his health care.

Society is a dynamic organization which is composed of individuals, families, and communities. Societal roles and trends interrelate with man's experience to direct his behavioral patterns and life goals. This

interaction is demonstrated by man's practicing of health maintenance and striving for well-being.

Education is a dynamic activity which involves the teaching-learning process. Learning is the acquisition of new knowledge and skills which requires mental activity and behavioral change. It is enhanced by a climate which takes into consideration the learner's previous educational and life experiences. Learning is a self-directed activity requiring motivation, desire, and effort by the learner, and the learner's response to the process is unique to that individual.

The Nursing Faculty endorses two levels of nursing practice — the technical and the professional — and conceptualizes the nursing profession as follows:

The first level of nursing is provided by the technical nurse who is educated in associate degree nursing programs and the second level by the professional nurse prepared in baccalaureate and post-baccalaureate programs. The nursing care provided by the associate degree nurse demonstrates a high degree of technical skill based upon principles from an ever expanding body of science. The associate degree nurse works directly under the supervision of the professional nurse, performing those skills necessary to carry out the prescribed nursing care plan and the medical regimen. The professional nurse, although proficient in technical skills, assumes primary responsibility for the nursing care of individuals and groups, coordinates the health team as it assists the client with his goals, serves as a resource person for all persons giving direct client care, and engages in research to evolve nursing theory.

ASSOCIATE OF SCIENCE IN NURSING PROGRAM

Purpose

The Clarion University Associate of Science in Nursing Program is designed to prepare technically competent nurses able to give client-centered care in first-level positions in hospitals or other health agencies and to work effectively with other members of the health team. Upon completion of the program, the graduate will be eligible to take the state licensure examination.

Program Objectives

Clarion University Associate of Science in Nursing Program prepares the graduate to:

1. Provide safe technical nursing care to individuals and families.
2. Utilize the nursing process in assisting individuals and families with their health needs.

3. Establish effective interpersonal relationships with individuals and families.
4. Provide health teaching to individuals and families during their life processes.
5. Demonstrate responsibility and accountability in nursing activities and personal life.

PROGRAM POLICIES

Physical Examination Requirement

In accord with the Rules and Regulations of the State Board of Nursing Examiners, the physical examination requirements of the Associate of Science in Nursing Program are:

Pre-entrance examination

- (1) Complete physical examination including tine test
- (2) Chest X-ray
- (3) Laboratory tests, including complete blood count, serology, and urinalysis
- (4) Dental and eye examinations
- (5) Tetanus toxoid booster within 5 years
- (6) Poliomyelitis immunizations
- (7) Rubella Titer (all applicants)

Second year health examination

- (1) Complete physical examination by family physician using the Clarion University ADNPN form
- (2) Chest X-ray
- (3) Complete blood count
- (4) Serology
- (5) Urinalysis

Class Attendance Policy

The nursing faculty believes that all students should be encouraged to be self-directive and responsible individuals. Due to the large amount of educational material covered in each nursing class and the nature of the laboratory sessions, and clinical experiences, students are expected to attend all nursing classes, laboratory sessions, and clinical experiences. This includes pre and post conferences. If absence from class is necessary the student is expected to notify the Division of Nursing prior to

class. If the student is unable to attend clinical experience, he/she is expected to notify the assigned hospital nursing unit of his/her planned absence and then notify the Division of Nursing Office.

It is understood that an excused absence from regularly scheduled classes does not excuse the student from responsibility from examinations, knowledge of assignments, or the learnings to be facilitated by the class.

A student who is absent from clinical experience because of illness is expected to make up the time at the discretion of the instructor. It is the student's responsibility to see the instructor about make up arrangements. Attendance at pre and post conference is part of clinical experience and, therefore, required. A student absent from class and clinical experience for more than one week will be evaluated by the nursing faculty as to his/her performance and need to repeat the course. Prolonged absence of a student will be individually evaluated by faculty as to the need for repetition of the course.

Student Employment

Students who find it necessary to work in order to supplement their finances while enrolled in the nursing curriculum, should not work hours that would interfere with class work and clinical experience. This includes night shifts prior to clinical experience.

If the student desires to find employment in the nursing field, he/she can only be employed as a nursing assistant. The student will not represent Clarion University in level of performance or attire, but will function within the job description of a nursing assistant of the employing agency.

Academic Requirements In Nursing

The academic requirements of the university apply to the Associate of Science in Nursing Program, but in addition the student must earn grades of at least C in theory and PASS in clinical practice in each of the following nursing courses: Nursing 101, 102, 103, 201, and 202.

All the nursing courses listed above entail (a) theory and (b) clinical practice (hospital experience). The student receives two grades in each course. The theory area is graded on the conventional A-B-C-D-E scale with any mark below C indicating failing achievement. Students will be graded in theory according to the following:

Grading Scale

93-100	A
84-92	B
75-83	C
74-66	D
65-Below	E

The clinical practice experience is graded Pass/Fail instead of being awarded a letter grade. A student is evaluated by four critical elements which must be met in order to receive a passing grade in the clinical area.

An unsatisfactory grade in either the theory or the clinical practice experience or both areas of any of the nursing courses listed in this section is regarded as a failure for the entire course and failure in the nursing program, and the student is automatically dropped from the nursing program.

Readmission

Students who are dropped from the Nursing Program because of unsatisfactory performance as noted above may apply for readmission to the Nursing Program. Readmission to the Nursing Program involves the professional judgment of the Nursing faculty with its recommendation based upon a majority vote of the faculty. If the student is readmitted into the Nursing program after a failure, she/he must repeat both components regardless of the grade in either.

It should be understood that a student dropped from the Nursing Program is not by such action dropped from the university. Either academic probation or academic suspension from the college is based upon failure to achieve academic standards detailed on page 44 of this catalog. Thus, a student who is dropped from Nursing for unsatisfactory performance in Nursing courses may be eligible to transfer into another area of study.

Graduation Requirements

The policy for graduating from the Associate of Science in Nursing Program is:

- 1. Completion of Associate of Science in Nursing curriculum — 67 credit hours.
- 2. "C" level achievement in the general education English requirement.
- 3. Attainment of a scholastic average of 2.00 on a 4.00 scale.

Associate of Science in Nursing Program Curriculum

Students are expected to complete the Associate of Science in Nursing Program in two academic years. The curriculum outline for the nursing program is as follows:

			Clock Hours		Credit
FIRST SEMESTER			Lec.	Lab.	
Eng.	111	Composition	3	0	3
Biol.	258	Anatomy & Physiology I	2	3	3
Psy.	211	General Psychology	3	0	3
Nurs.	101	Introduction to the Nursing Process: Fundamentals of Nursing	5	9	8
			13	12	17

SECOND SEMESTER

Biol.	259	Anatomy & Physiology II.....	2	3	3
Psy.	322	Developmental Psychology	3	0	3
		Elective	3	0	3
Nurs.	102	Nursing Process I: Parental and Child Health	2	6	4
Nurs.	103	Nursing Process II	2	6	4
			12	15	17

THIRD SEMESTER

SCT	113	Fundamentals of Speech	3	0	3
Biol.	260	Microbiology	2	3	3
Soc	211	Principles of Sociology	3	0	3
Nurs.	201	Nursing Process III	4	12	8
			12	15	17

FOURTH SEMESTER

Eng.	200	Composition & Literature	3	0	3
Hum.		Elective	3	0	3
Nurs.	202	Nursing Process IV	4	12	8
Nurs.	203	Nursing Seminar	2	0	2
			12	12	16

Admission into the Associate of Science in Nursing Program

1. General Admission Policy

Candidates for admission into the Associate of Science in Nursing Program must make application to the Admissions Office at Clarion University. The nursing faculty recommends that each candidate have a personal interview prior to acceptance into the nursing program. Admission criteria for entrance include the following:

- a. candidates whose class rank is 2/5 or better
- b. candidates who have exceptionally high college board scores
- c. mature individuals who seem highly motivated

All nursing applicants are required to have a pre-acceptance interview with the Director, Division of Nursing or a faculty representative. The results of the personal interview are based on the following criteria:

- a. Basic interpersonal communication skills
 - (1) Active listening
 - (2) Eye contact
 - (3) Command of language
 - (4) Response to questions
- b. Maturity
 - (1) Self esteem
 - (2) Self confidence
 - (3) Poise
 - (4) Presence

- c. Motivation
 - (1) Reason for desiring nursing
 - (2) Conceptualization of nursing
 - (3) Present responsibilities
- d. Applicability
 - (1) Realistic goals
 - (2) Suitability
 - (3) Interpersonal relationships
 - (4) Judgmental/non-judgmental attitude
 - (5) Stability
- e. Previous educational and/or work experiences
 - (1) Attitude
 - (2) Achievement
 - (3) Recommendations

Following this, the Director of Admissions evaluates the applicants according to their academic qualifications and makes the selection of individuals who are deemed acceptable for entrance into the Associate of Science in Nursing Program.

Nursing applicants are required to present evidence of satisfactory completion of high school courses in biology and chemistry or the equivalent within five years prior to admission into the nursing program.

2. Transfer Policy

The transfer policy for nursing students is consistent with that of Clarion University.

- a. Application must be made directly to the Office of Admissions:

Director of Admissions
Clarion University
Clarion, PA 16214

- b. Official transcript of credits and certificates of honorable dismissal must accompany the application for admission. A "C" or better is required on all credits transferred. Transfer courses must be comparable with those offered at Clarion.
- c. A transfer student must have a minimum of one year's residence (30 semester hours of credit) to qualify for a degree from Clarion University.

Nursing credits are only transferrable if received from an Associate Degree or Baccalaureate Program within the preceding two years. Only the courses Nursing 101, Nursing 102, and Nursing 103 are transferrable and only if they are deemed comparable by the nursing faculty.

Individuals transferring into the Associate Degree Nursing Program will be evaluated according to the following criteria:

- a. Personal Interview (see General Admission Interview Criteria)
- b. Educational Transcript
- c. Educational References
- d. Competency Examination
 - (1) Theory
 - (2) Practice

A maximum of two students will be accepted in the nursing program per year through transfer.

3. Advanced Standing Policy

The policy for Licensed Practical Nurses seeking advanced standing in the Associate Degree Nursing Program:

- a. Application must be made directly to the Office of Admissions:

Director of Admissions
Clarion University
Clarion, PA 16214

- b. Official transcript of the Practical Nursing Program must accompany the application for admission.
- c. A student granted advanced standing must have a minimum of one year's residence (30 semester hours of credit) to qualify for a degree from Clarion University.

Advanced standing is granted only to individuals who have graduated from a state approved Practical Nurse Program and have successfully completed the State Board Test Pool Examination for Practical Nurse Licensure.

Individuals transferring into the Associate Degree Nursing Program will be evaluated according to the following criteria:

- a. Personal Interview (see General Admission Interview Criteria)
- b. Educational Transcript
- c. Educational Reference
- d. Scholastic Aptitude
- e. State Board Examinations
- f. Competency Examinations
 - (1) Theory
 - (2) Practice

A maximum of two students will be accepted into the Nursing Program per year through advance standing.

4. Intercollegiate Transfer Policy

A student presently enrolled in a program at Clarion University may request admission into the Associate of Science in Nursing Program by filling out a Change of Status Form and submitting it to the Nursing Division at Venango Campus.

1. A student must have the Change of Status Form completed and sent to the Nursing Division by January 31, for admission to the program in September of that year.
2. Interviews of prospective transfer students from within the university will begin February 1.
3. No more than five slots will be held open for transfer students from within the university.
4. Students requesting intercollegiate transfer must meet the following criteria:
 - a. satisfactory grades the previous semester at Clarion
 - b. an overall Q.P.A. consistent with the policy of the University's **two year programs**
 - c. a high school class rank of 2/5 or better
 - d. high college board scores
5. The candidate will be evaluated on:
 - a. Scholastic aptitude
 - (1) Class rank
 - (2) College Entrance Examination Board Tests
 - (3) Previous University Semester Grades
 - (4) University QPA
 - b. Personal Interview (see General Admissions Interview Criteria)

BACCALAUREATE OF SCIENCE IN NURSING PROGRAM

Purpose

Clarion University Baccalaureate of Science in Nursing Program is designed to build upon the knowledge and experience of registered nurses. It prepares the graduate as a generalist in a variety of health settings through the internalization of new concepts relevant to professional nursing.

Program Objectives

Clarion University Baccalaureate of Science in Nursing Program prepares the graduate to:

1. Demonstrate proficiency in providing professional nursing care to individuals, families and communities throughout the health-illness continuum.
2. Utilize the nursing process in the delivery of professional nursing care to individuals during their life processes.

3. Communicate with individuals, families and communities to affect change.
4. Promote maximum well-being through health education.
5. Demonstrate leadership skills in the practice of nursing.
6. Demonstrate responsibility and accountability in one's personal and professional life.

Baccalaureate of Science in Nursing Program Curriculum

FIRST SEMESTER			Cr.
Chem.	153	General Chemistry I	3
Chem.	163	General Chemistry I Lab	1
Nurs.	357	Leadership Skills in Nursing	3
Nurs.	340	Man-Health-Nursing	3
Nurs.	361	Advanced Nursing Process	6
			<u>16</u>

SECOND SEMESTER			
Nurs.	462	Advanced Nursing Process: Acute Care	6
Chem.	154	Chemistry II	3
Chem.	165	Chemistry II Lab	1
		Elective	3
Psy.	322	Educational Psychology	3
			<u>16</u>

THIRD SEMESTER			
Nurs.	463	Advanced Nursing Process: Chronic Care	6
Biol.	453	Pathophysiology I	4
Chem.	205	Nutrition	3
Psy.	230	Statistics	3
			<u>16</u>

FOURTH SEMESTER			
Nurs.	464	Advanced Nursing Process: Health Promotion and Maintenance	6
Biol.	454	Pathophysiology II	4
Nurs.	445	Inquiry in Nursing	2
Hum.		Elective	3
			<u>15</u>

Admission into the Baccalaureate of Science in Nursing Program

Admission into the Baccalaureate Program in Nursing is contingent upon successful fulfillment of lower division requirements. Nursing students can fulfill requirements of the lower division by:

1. Transferring 32 nursing credits from an Associate Degree in Nursing Program, or successful completion of selected challenge exams.
2. Transferring 33 general education credits from any accredited college or successful completion of selected challenge exams.

Admission criteria into the Upper Division Program in Nursing are as follows:

1. Be currently licensed as a registered nurse in Pennsylvania.
2. Have worked a minimum of one year as a registered nurse.
3. Show evidence of professional and personal liability insurance coverage.
4. Show evidence of scholarship as demonstrated by School of Nursing transcripts. The term "scholarship" shall be defined as having achieved a Q.P.A. of 2.5 on a 4.0 point system, or a comparable equivalent of a C+ during his/her technical nursing education. (The applicant may submit additional evidence of achievement.) The individual must have maintained a 2.5 Cumulative Grade Point Average in the Lower Division nursing and general education requirements for acceptance into the Upper Division Nursing Program.
5. Have earned a satisfactory score on the required National League for Nursing Examinations of at least the 60th percentile based on the accredited associate degree school norms. Individuals from Associate Degree Programs must take the National League for Nursing Examinations regardless of previous scores, if it has been more than five years from the date of graduation to the date of application.
6. Demonstrate clinical competency by a supervised nursing practicum.



VENANGO CAMPUS

ASSOCIATE DEGREE IN HABILITATIVE SERVICES

The associate degree program is designed to provide training to persons desiring to work in paraprofessional roles with exceptional citizens. The emphasis is on the blanket concept of "normalization" and related topics such as deinstitutionalization, mainstreaming, etc. Persons completing this program will be prepared to assist in the social-vocational adjustment of handicapped persons to community living.

Since paraprofessional roles in habilitative services will vary, the program of preparation offers both specialized and generic competencies. The person completing this program may opt for further education in Special Education and/or Habilitative Sciences at the Main Campus.

GENERAL EDUCATION

			Cr.
Eng.	111	English Composition	3
SCT	113	Fundamentals of Speech	3
Psy.	211	General Psychology	3
Psy.	225	Psychology of Adjustment	3
Psy.	260	Developmental Psychology	3
Psy.	322	Educational Psychology	3
Soc.	211	Principles of Sociology	3
HPE	310	Adapted Physical Education	2
Electives:		Humanities or Natural Science	9
		General or free elective	3
			<u>35</u>

SPECIAL EDUCATION

Sp. Ed.	210	Human Exceptionalities	3
Sp. Ed.	215	Human Relations Skills Training	2
Sp. Ed.	220	Nature of Mental Retardation	3
Sp. Ed.	225	Early Field Experience	1
Sp. Ed.	230	Behavior Disorders	2
Sp. Ed.	235	Learning Disorders	2
Sp. Ed.	240	The Physically Handicapped	3
Sp. Ed.	245	Behavior Management	2
Sp. Ed.	250	The Helping Relationship: Principles and Procedures	3
Sp. Ed.	295	Field Experience	6
			<u>27</u>

SUGGESTED FOUR-SEMESTER SEQUENCE

FIRST SEMESTER

Eng.	111	English Composition	3
SCT	113	Fundamentals of Speech	3
Sp. Ed.	210	Human Exceptionalities	3
Sp. Ed.	215	Human Relations Skills Training	2
Psy.	211	General Psychology	3
			<u>14</u>

SECOND SEMESTER

Psy.	225	Psychology of Adjustment	3
Psy.	260	Developmental Psychology	3
Sp. Ed.	220	Nature of Mental Retardation	3
Sp. Ed.	225	Early Field Experience	1
Sp. Ed.	230	Behavior Disorders	2
Sp. Ed.	235	Learning Disorders	2
Elective — Humanities or Natural Sciences			3
			<hr/> 17

THIRD SEMESTER

Sp. Ed.	240	The Physically Handicapped	3
Soc.	211	Principles of Sociology	3
Psy.	322	Educational Psychology	3
Sp. Ed.	245	Behavior Management	2
Electives — Humanities or Natural Sciences			6
			<hr/> 17

FOURTH SEMESTER

Sp. Ed.	250	The Helping Relationship: Prin. & Proc.	3
Sp. Ed.	295	Field Experience	6
HPE	310	Adapted Physical Education	2
Elective — General Elective			3
			<hr/> 14

VENANGO CAMPUS

GENERAL COURSE OFFERINGS

NOTE: Certain courses listed under general education below are also applicable to major fields. Students should consult the university catalog and their advisors to determine which courses should be taken for specific majors.

				Credits
I. MODES OF COMMUNICATION				13
Eng.	111	English Composition	3	
Math.	111	Basic Elementary Math (or)	3	
Math.	112	Excursions in Math	3	
SCT	113	Fundamentals of Speech	3	
II. HUMANITIES				12
Art	110	The Visual Arts	3	
Art	191	Studio Research	3	
Art	125	Color & Design	3	
Eng.	170	The Literary Experience	3	
Eng.	201	Adv. Comp.	3	
Eng.	202	Beginning Creative Writing	3	
Eng.	209	Special Topics in Lit. ...	3	
Eng.	291	Short Fiction	3	
Mus.	111	Intro. to Music	3	
SCT	120	Theater Play Production	3	
SCT	251	Voice & Diction	3	
SCT	253	Intro. to Theater	3	
III. SOCIAL SCIENCE				12
Econ.	211	Prin. of Econ. I	3	
Psy.	211	Gen. Psy.	3	

Econ.	212	Prin. of Econ. II	3	Psy.	215	Psy. of Adj.	3
Econ.	221	Econ. & Bus. Stat. I	3	Psy.	228	Human Behav. in Org.	3
Hist.	111	Anc. & Med. Civ.	3	Psy.	260	Developm. Psy.	3
Hist.	112	Mod. Civ.	3	Psy.	331	Child Psy.	3
Hist.	120	U.S. History to 1877	3	Geog.	254	Cons. Nat. Res.	3
Hist.	121	U.S. History Since 1877	3	Geog.	257	Geog. U.S. & Canada	3
Hist.	235	Topics Intel. Eur. Hist.	3	P.S.	211	Am. Gov't.	3
Hist.	225	Topics in Am. Soc. Hist.	3	Soc.	211	Prin. of Soc.	3
Hist.	354	Contemp. Am. Hist.	3				
IV. NATURAL SCIENCE/MATHEMATICS							
Biol.	111	Basic Biol.	4	Math.	100	Practical Math	3
Biol.	153	Intro. Animal Biol.	4	Math.	131	Math for Bus. & Econ. I	3
Biol.	154	Intro. Plant Biol.	4	Math.	232	Calculus for Bus.	3
Biol.	201	Genetics (as needed)	3	Math.	171	Precalculus	4
Biol.	258	Anatomy & Physiology I	3	Math.	172	Calc. w/An. Geom. I	4
Biol.	259	Anatomy & Physiology II	3	Math.	221	Applied Statistics	3
Biol.	260	Microbiology	3	Math.	271	Calc. w/An. Geom. II	4
Chem.	153	General Chem. I	3	Math.	272	Calc. w/An. Geom. III	4
Chem.	163	General Chem. Lab I	1	E.S.	111	Basic Earth Science	3
Chem.	154	General Chem. II	3	E.S.	252	Physical Geology	3
Chem.	164	General Chem. Lab II	1	Ph. Sci.	111	Basic Phys. Sci. I (Chem.)	3
				Ph. Sci.	112	Basic Physical Science II (Physics)	3
V. ELECTIVES FOR GENERAL EDUCATION							
Eng.	110	Basic Composition Skills	3				
Eng.	200	Composition and Literature	3				
Eng.	206	Business Writing	3				
HPE	111	Health	2				
HPE	147	Tennis	1				
HPE	151	Basketball (Men's Rules)	1				
HPE	153	Volleyball (Men's Rules)	1				
BUSINESS EDUCATION SUBJECTS							
ACTG	251	Fin. Actg.	3	CIS	253	Comp. Org. & Assem. Lang.	3
ACTG	252	Manag. Actg.	3	BSAD	228	Human Behav. in Org.	3
ACTG	253	Factory Actg.	3	BSAD	240	Legal Environm. I	3
ACTG	254	Payroll Actg.	3	BSAD	241	Legal Environm. II	3
ACTG	255	Fin. Statement Prep. & Analysis	3	MGMT	120	Intro. to Bus.	3
ACTG	256	Income Tax Procedures & Forms	3	MGMT	121	Fund. of Mgmt.	3
CIS	151	Intro. to FORTRAN	3	MGMT	227	Applied Superv.	3
CIS	152	Advanced FORTRAN	3	OFMT	131	College Typing	3
CIS	200	Comp. Inf. Proc.	3	OFMT	132	Production Typing	3
CIS	211	Report Prog. Gen.	3	OFMT	135	College Shorthand	3
CIS	212	Micro-Mini Computers	3	OFMT	136	Executive Shorthand	3
CIS	223	Computer Prog. COBOL I	3	OFMT	221	Office Management	3
CIS	224	COBOL II	3	OFMT	230	Office Procedures	3
				OFMT	231	Office Practice	3
SPECIAL EDUCATION SUBJECTS							
Sp.Ed.	210	Human Except	3	Sp.Ed.	235	Learn. Disorders	2
Sp.Ed.	215	Human Rel. in Skills Train.	2	Sp.Ed.	240	The Phys Handicapped	3

Sp.Ed.	220	Nature of Ment. Retard.....	3	Sp.Ed.	245	Behav. Mgmt.	2
Sp.Ed.	225	Early Field Exp.	1	Sp.Ed.	250	The Helping Relationship: Prin. & Procedures...	3
Sp.Ed.	230	Behav. Disorders	2	Sp.Ed.	295	Field Experience	6

PROFESSIONAL EDUCATION COURSES

Ed.	323	Social Foundations of Education	3
Ed.	329	Audio-Visual Education	2
Psych.	322	Educational Psychology	3
HPE	310	Adapted Physical Education	2



COURSE DESCRIPTIONS

Academic calendar sequence in which course is offered follows each course description. The designated sequence is probable rather than guaranteed, and is subject to change.

Each semester = annually

Fall = first semester

Spring = second semester

On demand = course offered if potential enrollment warrants.

ANTHROPOLOGY

ANTH. 211: ANTHROPOLOGY 3 s.h.

This course deals with the origin, diversification, and evolution of man's way of life (cultures) from extinct primitive systems to modern industrial civilizations. This course is an introduction to anthropology (the study of man) with emphasis on the nature and concept of culture. Some work is done in physical anthropology. Emphasis is placed on the simple and complex cultures of the world with specific readings in each category. Each semester.

ANTH. 213: INTRODUCTION TO BIOANTHROPOLOGY 3 s.h.

A survey of the human species in time, place, and culture and the investigation of the factors underlying human variation. Each second year.

ANTH. 214: PRINCIPLES OF HUMAN ECOLOGY 3 s.h.

A study of the functional inter-relationships of man and his biophysical environment. Every second year.

ANTH. 250: PREHISTORIC NORTH AMERICA 3 s.h.

The course examines the development of North American Indian cultures from the beginning of human migration to the late Pleistocene to the coming of Europeans. Emphasis will be on man's interrelationship with the various New World environments in time and space which led to the rise of prehistoric cultures, food production, trade, etc. No prerequisites. Every second year.

ANTH. 251: HISTORIC INDIANS OF NORTH AMERICA 3 s.h.

This course is an ethnographic survey of American Indians. Cultural processes, historic events, and ecological adjustments are explored in order to understand the diversity of Indian culture at the time of their discovery by Europeans. American Indian acculturation and contemporary Indian issues are also considered. Every second year.

ANTH. 353: ARCHAEOLOGY OF EASTERN NORTH AMERICA 3 s.h.

The course provides a detailed survey of prehistoric developments in North America east of the Mississippi from Late Pleistocene to the Colonial Period. The principal aim is to familiarize students with the prehistory of the Amerind populations in the area, including the gradual emergence of the Woodland pattern. Summers only.

ANTH. 354: CULTURAL HISTORY OF AFRICA AND ASIA 3 s.h.

A survey of major cultural trends of Old World cultures exclusive of Europe. Beginning with prehistoric Middle East, the spread of food production and its consequences is traced through space and time. Special emphasis is given to the rise and development of Asian cultural patterns. The second section of the course deals with African tribal cultures and their history. Every second year.

ANTH. 356: FIELD ARCHAEOLOGY 4 s.h.

This course will give undergraduate students an opportunity to participate actively in all phases of archaeology field investigation of a limited section of the Allegheny river drainage in order to determine cultural sequence, settlement patterns, population density, economy, cultural influences, technologies, and human ecology. Procedures will include reconnaissance, testing of suspected sites, site survey, controlled excavation, site mapping, interpretation and recovery of specimens, and a final site report. Summers only.

ANTH. 357: INDIANS OF SOUTH AND CENTRAL AMERICA 3 s.h.

A survey of Indian cultures from the beginnings in the Late Pleistocene to the coming of the Conquistadores; special emphasis is placed upon culture developments, the rise of states, native agriculture, and the development of arts and crafts, including architecture and ceremonial art. No prerequisite. Every second year.

ANTH. 358: WORLD PREHISTORY 3 s.h.

This course covers the cultural development of Man from the Lower Paleolithic to the beginnings of urbanism in the Bronze and Iron Age. The course examines man's development in Europe, Africa, Asia, and the New World; draws comparisons between cultures; studies the diffusion of cultural traits; and summarizes recent developments in research. No prerequisite. Every second year.

ANTH. 359: PRIMITIVE SCIENCE AND TECHNOLOGY 3 s.h.

This course is designed to provide a better understanding of Man's relationship with the utilization of environment. It traces the development which ultimately leads to the rise of technological societies. In investigating Man's attempts to come to an understanding of the forces around him, the course provides a survey of the history of scientific thought. Every second year.

ANTH. 360: INTRODUCTION TO FOLKLORE 3 s.h.

The course covers the main aspects of oral traditions such as folklore, legend, myths, riddle, folksong, etc., and analyzes the relationship of oral traditions to literature. The systematic study of folklore, its methods, research approaches, and related subjects are investigated. No prerequisite. Every second year.

ANTH. 361: WITCHCRAFT, MAGIC, AND RELIGION 3 s.h.

This course is a cross cultural comparative analysis of man's environment with the supernatural. The role of religion in society is explored and theories dealing with the nature and function of various aspects of supernaturalism are discussed from an anthropological perspective. No prerequisite. Every second year.

ANTH. 362: HISTORY AND METHODS OF ANTHROPOLOGY 3 s.h.

This course provides a general overview of the history of anthropology as an academic

discipline, combined with a survey of anthropological theory and research methods. Every second year.

ANTH. 363: HISTORICAL ARCHAEOLOGY 3 s.h.

Designed to provide an introduction to the problems and methods of historical archaeology with special emphasis on North America. Usually to be taken in conjunction with Anth. 356 (Field Archaeology) as an alternative to Anth. 353 (Archaeology of Eastern North America.)

ANTH. 370: PRACTICUM IN MUSEOLOGY 3 s.h.

The course is designed to provide undergraduates with an introduction to the role and operation of museums through lectures, field trips, student projects and individual research. Every second year.

ANTH. 400: INDIVIDUAL RESEARCH 2 s.h.

Individual research, designed as an advanced course in anthropology, provides for the student's individual approach to a specific problem, defined in conference with the instructor. Regular sessions with the faculty member in charge evaluate the progress of the work and chart its direction. Students are expected to acquire research techniques in dealing with their topics. All branches of anthropology may be used to select a topic. Credit and grades will be given only if the project (term paper, survey, investigation, etc.) has been completed to the satisfaction of the project advisor and the departmental chairman. Prerequisite: Anth. 211. On demand.

ANTH. 401: INDIVIDUAL RESEARCH: ARCHAEOLOGY 2 s.h.

Individual research, designed as an advanced course in archaeology, provides for the student's individual approach to a specific problem, defined in conference with the instructor. Regular sessions with the faculty member in charge evaluate the progress of the work and chart its direction. Students are expected to acquire research techniques in dealing with their topics. All branches of archaeology may be used to select a topic. Credit and grades will be given only if the project (term paper, survey, investigation, etc.) has been completed to the satisfaction of the project advisor and the departmental chairman. Prerequisites: Anth. 211, 356. On demand.

ANTH. 402: INDIVIDUAL RESEARCH: BIOANTHROPOLOGY 2 s.h.

Individual research, designed as an advanced course in bioanthropology, provides for the student's individual approach to a specific problem, defined in conference with the instructor. Regular sessions with the faculty member in charge evaluate the progress of the work and chart its direction. Students are expected to acquire research techniques in dealing with their topics. All branches of bioanthropology may be used to select a topic. Credit and grades will be given only if the project (term paper, survey, investigation, etc.) has been completed to the satisfaction of the project advisor and the departmental chairman. Prerequisites: Anth. 211, 213, 356, or the consent of instructor. On demand.

SUMMER ARCHAEOLOGICAL FIELD SCHOOL 9 s.h.

An integrated program especially designed to provide undergraduates with a practical and theoretical background in modern archaeological research. The program combines classroom and laboratory work with field research, including excavation. All participants must register for Anth. 353 (Archaeology of Eastern North America) or Anth. 363 (Historical Archaeology), and Anth. 356 (Field Archaeology). Pennsylvania teachers may take the program for credit toward permanent certification.

ART

ART 110: THE VISUAL ARTS 3 s.h.

This is an introductory art course which deals with form and content as well as the processes and products of art, intended to enrich and deepen the student's awareness and understanding of visual art forms. Each semester.

ART 111: ART HISTORY I 3 s.h.

A study of the visual arts in the western world including Prehistoric, Egyptian, Mesopotamian, Greek, Roman, Early Christian, Romanesque, and Gothic periods. Emphasis on stylistic and historical analysis. Papers, reading assignments. Fall semester.

ART 112: ART HISTORY II 3 s.h.

A study of the visual arts in the western world beginning with the Renaissance through Baroque, Mannerist, Rococo, and French art of the 19th century. Emphasis on stylistic and historical analysis. Papers, reading assignments, Spring semester.

ART 113: HISTORY OF ARCHITECTURE 3 s.h.

A study survey of great architectural works of the past and present in the western world. Includes systems of construction and stylistic analysis as well as the development of modern architecture and the emergence of such architects as Sullivan, Wright, Gropius, LeCorbusier, Fuller, Mies van der Rohe. Alternate years.

ART 114: HISTORY OF 20TH CENTURY ART 3 s.h.

A study of the major movements and masters of painting and sculpture in Europe and the United States in the 20th century; its relation to other elements of culture, and its place in the historical tradition of Western art. Papers, reading assignments. Alternate years.

ART 115: AFRICAN TRADITIONS IN ART 3 s.h.

A study of African heritage in the visual arts. Emphasis will be on the urban kingship tradition versus rural individualism, in the major arts of sculpture and masking as well as architecture, body ornamentation, and crafts. The development of Afro-American art based on these traditions will be explored. On demand.

ART 121: INTRODUCTION TO DRAWING 3 s.h.

An introductory course designed to develop the innate drawing ability of students by direct observation of inanimate objects through the use of a variety of traditional techniques and tools. Required of art majors. Fall, annually.

ART 222: FIGURE DRAWING 3 s.h.

An introductory course designed to develop the innate drawing ability of students by direct observation of the human form through the use of a variety of traditional techniques and tools. Required of art majors. Spring, annually.

ART 125: COLOR AND DESIGN 3 s.h.

A study of the elements and principles of two dimensional forms in design. Creative processes are stressed. Required of all art majors. Fall semester.

ART 126: THREE DIMENSIONAL DESIGN 3 s.h.

The exploration of three dimensional design forms in order to gain a deeper understanding of the elements and principles of design. Required of all art majors. Spring semester.

ART 131: PAINTING I 3 s.h.

An introduction to painting in oil or acrylic in which the student explores basic materials and techniques of painting. Fundamentals of pictorial organization and visual expression will be stressed. Each semester.

ART 232: PAINTING II 3 s.h.

Continued exploration of a wide range of materials and techniques with an emphasis on solving visual and color problems as a vehicle for personalized expression. Prerequisite: Art 131. Each semester.

ART 333: PAINTING III 3 s.h.

Further development of expressive ideals in oil or acrylics with special attention given to the concepts involved in the art movements of the 20th century. Prerequisite: Art 232. Each semester.

ART 434: PAINTING IV 3 s.h.

An investigation into the expressive and visual aesthetic concepts of figure and portrait painting. Prerequisite: Art 333. Each semester.

ART 141: SCULPTURE I 3 s.h.

A workshop course investigating the uses and properties of primary materials and the processes associated with the forming of plaster, clay, and wax as well as approaches to problems using unusual materials. Each semester.

ART 242: SCULPTURE II 3 s.h.

A studio course utilizing clay modeling as the predominate means to record and relate information required from direct observation of the figure. A three-dimensional analysis of the human figure through lecture demonstration and studio work in wax and clay from live models is the main focus of this offering, in addition to life size portraiture and multiple figure compositions. All finished works will be bisque fired. Prerequisite: Art 141. Each semester.

ART 343: SCULPTURE III 3 s.h.

An analysis through studio experience of the various uses and meaning of form in the major sculptural movements of the 20th century. The student will develop working skills in model and mold making, leading to casting and forming in terracotta and metals as well as direct carving in stone. Prerequisite: Art 242. Each semester.

ART 444: SCULPTURE IV 3 s.h.

This studio course uses the traditional "lost wax" method of bronze castings as well as originals for sand casting in aluminum. The student will employ modeling in wax from which the unique bronze is cast. This course stresses a sculptural approach that is permanent, utilizing both traditional and advanced means of "lost wax." Open studio work periods are intended to encourage the student along independent lines of development. Prerequisite: Art 343. Each semester.

ART 151: CERAMICS I 3 s.h.

Design and construction of clay pieces in varied techniques and approaches. Basic clay and glaze technology, hand building, throwing, turning, and firing processes. Each semester.

ART 252: CERAMICS II 3 s.h.

Students work with the technical aspects of ceramics-glaze formulation, glaze calcula-

tions; experiment with natural local clays and desired clay bodies, decorating methods, glazing, and firing techniques while pursuing individual interests. The student works on an independent level investigating his/her interests leading to a final individual critique of work accomplished. Prerequisite: Art 151. Each semester.

ART 353: CERAMICS III 3 s.h.

The student explores the fundamentals of glazed tests, materials test, eutectics, the calculation of glazes, ceramic kilns, and their design. The materials used will be studied, along with the design of ceramic equipment and their special uses. Production of pots will be downplayed for the concentration on the technical aspects and equipment in the production of the pot. Prerequisite: Art 252. Each semester.

ART 454: CERAMICS IV 3 s.h.

The student works and sets goals in his/her own creative interests for a semester of work. If the student chooses handbuilding or thrown pottery, he/she begins work toward a portfolio for a career or entrance into an M.F.A. program. Prerequisite: Art 353. Each semester.

ART 161: FIBER I 3 s.h.

An introduction to principles and processes in fiber and fabrics and the many vocational possibilities in the field. Structural processes in two and three dimensional form, using primitive loom and non-loom techniques. Basic dyeing and printing methods for fibers and fabric surfaces. Each semester.

ART 262: FIBER II 3 s.h.

Use of the loom, off-loom processes, and application of design to ready made fabrics. Design principles, quality workmanship, and expressive content are emphasized. Prerequisite: Art 161. Each semester.

ART 363: FIBER III 3 s.h.

Further studies of loom controlled structures, off-loom structures, and fabric surface design. Research into the historical context of fibers and textiles. Prerequisite: Art 262. Each semester.

ART 464: FIBER IV 3 s.h.

Suitably complex structural and design problems with student-directed research into technical and historical areas of interest. Vocational direction is emphasized. Prerequisite: Art 363. Each semester.

ART 165: PRINTED & DYED FABRICS I 3 s.h.

Modular or repeat pattern applied to fabric surfaces by stamping and silkscreen. Spring, annually.

ART 266: PRINTED & DYED FABRICS II 3 s.h.

Surface design processes and development of expressive imagery. Prerequisite: Art 165. Spring, annually.

ART 367: PRINTED & DYED FABRICS III 3 s.h.

Research on a historical surface design process and individual studio work based on that process. Prerequisite: Art 266. Spring, annually.

- ART 468: PRINTED & DYED FABRICS IV 3 s.h.
 Research into hand or industrial technologies in surface design, and development of personal imagery. Prerequisite: Art 367. Spring, annually.
- ART 171: PRINTMAKING I 3 s.h.
 Problems in composition utilizing basic techniques and principles of the printmaking processes, i.e., collage prints, lino cuts, engraving, calographs, and serigraphy. Annually.
- ART 272: PRINTMAKING II 3 s.h.
 Problems in color utilizing techniques and principles of the printmaking processes. Prerequisite: Art 171. Annually.
- ART 373: PRINTMAKING III 3 s.h.
 Advanced problems in composition and color utilizing techniques and principles of intaglio, relief, planographic or stencil processes. (The student may choose 2 processes.) Prerequisite: Art 272. Annually.
- ART 474: PRINTMAKING IV 3 s.h.
 Advanced problems utilizing one technique of printmaking. Prerequisite: Art 373. Annually.
- ART 180: ARTS AND CRAFTS 3 s.h.
 An enrichment course for any student for a basic experience with crafts. Developing basic skills, techniques, and processes with a variety of craft materials will provide sufficient knowledge to pursue projects independently. Fiber manipulations of knotting and weaving techniques, stitching applique, printing, enameling, and batik are only a few possible areas to explore. Each semester.
- ART 181: JEWELRY I 3 s.h.
 Design and construction of individual pieces of jewelry from sterling silver, semi-precious stones, exotic woods, and other materials. The course deals with soldering techniques, casting techniques, methods of setting stones, chain construction, and all methods known for fabricating jewelry for human adornment. Each semester.
- ART 282: JEWELRY II 3 s.h.
 A continuation of study in the design and construction of jewelry pieces. The student continues advancing his skills and knowledge of metals, stones, woods, and other materials. Prerequisite: Art 181. Each semester.
- ART 190: TEACHING ART IN THE ELEMENTARY GRADES 3 s.h.
 The place of art and creative activity in the Elementary Public School curriculum is studied. Concern and information centers around the value of creativity, the art activity as an important part of the total learning of the child, the importance of self-expression, and the development of the child at different age levels. Classroom planning, presentation, motivation methods, and lesson plans are developed in workshops or actual teaching situations. Each semester.
- ART 191: STUDIO RESEARCH IN ART MEDIA 3 s.h.
 A basic course for elementary majors designed to familiarize and develop sensitivity and insight into media and art processes. The student explores shape, line, surfaces, value, and

color differences through the basic design problems. Various projects explore the characteristics of chalk, crayon, water color, tempera, clay, print media, papier mache, and sculptural materials. Two and three dimensional work problems in all media are studied.

ART 192: ELEMENTARY ART WORKSHOP 3 s.h.

A workshop designed to meet the needs in teachers in service. Emphasis is placed on materials, processes, and equipment used in today's elementary art program. Summers. On demand.

ART 300: SPECIAL TOPICS IN ART

Topics of interest in various areas of art. The format will be selected by the instructor. Offered when faculty available.

ART 323: ADVANCED DRAWING 3 s.h.

Designed to allow students the opportunity to further develop their drawing skills, and is offered concurrently with Art 121 and 222. Prerequisites: Art 121, 222. Each semester.

ART 400: SUPERVISED STUDY IN ART 1-6 s.h.

Opportunity to explore in depth an area of art according to need or interest. Regular weekly sessions with a faculty member to evaluate the progress of the work and chart its direction. Credit and grade will be given only if a scholarly paper or special project has been completed to the satisfaction of the faculty advisor. Prerequisite: Permission of instructor and department chairman.

BIOLOGY

BIOL. 111: BASIC BIOLOGY 4 s.h.

This course deals with the principles of biology. Topics include cellular structure and physiology, growth and repair, reproduction and development, control, sources of food energy, inheritance and man's interrelationship with his biological environment. The classification of plants and animals is reviewed briefly. Credit not to be applied toward Biology major. Each semester.

BIOL. 153: INTRODUCTORY ANIMAL BIOLOGY 4 s.h.

A survey of the animal kingdom, emphasizing structural, physiological and evolutionary relationships. The laboratory exercises reflect this approach; dissections and experimental procedures are also introduced. Three lectures and three laboratory hours weekly. Each semester.

BIOL. 154: INTRODUCTORY PLANT BIOLOGY 4 s.h.

Complementary to Biol. 153. A phylogenetic approach to the study of the plant kingdom, with emphasis on the evolution of plants, life cycle, reproductive patterns, physiology, morphology, and genetics. Two hours lecture and four hours laboratory weekly. Each semester.

BIOL. 201: GENETICS 3 s.h.

A study of the principles of inheritance in plants, animals, and microorganisms. Topics considered include: Mendelian genetics, modern genetics, the chemical basis of heredity, linkage, recombination, evolution, population genetics, and human genetics. Three lectures and two laboratory hours weekly. Prerequisite: Biol. 153 and 154 or consent of the instructor. Each semester.

BIOL. 202: ENVIRONMENTAL BIOLOGY 3 s.h.

Interaction of organisms and their biotic and abiotic environment; population dynamics and interactions; the reality of communities; energy transfer with an ecological system; components of the ecosystem. Two lectures and three laboratory hours weekly. One all-day Saturday field trip. Prerequisites: Biol. 153 and 154 or equivalent or consent of the instructor. Each semester.

BIOL. 203: CELL BIOLOGY 3 s.h.

Structure, biochemistry, and function of plant and animal cells. Two lectures and three laboratory hours weekly. Prerequisites: Biol. 153, 154, and Chem. 153, 154, 163, 164 and 254 or their equivalents or consent of the instructor. Each semester.

BIOL. 258: ANATOMY AND PHYSIOLOGY I 3 s.h.

A study of the normal structure of the human body and how it functions. Special attention is given to the integumentary, skeletal, muscular, nervous, and endocrine systems and their interrelationships. Two lectures and three lab hours weekly. Fall, annually. Venango Campus. Not for Biology majors.

BIOL. 259: ANATOMY AND PHYSIOLOGY II 3 s.h.

A continuation of Biol. 258, Anatomy and Physiology I. This course includes the circulatory, respiratory, digestive, urinary, and reproductive systems and their interrelationships. Two lectures and three laboratory hours weekly. Prerequisite: Biol. 258. Spring, annually. Venango Campus. Not for Biology majors.

BIOL. 260: MICROBIOLOGY 3 s.h.

A study of microorganisms including viruses, bacteria, fungi, and protozoa, with emphasis on those associated with human health and disease. Consideration is given to immunity and resistance to infectious diseases and to their epidemiological and public health aspects. Laboratory emphasis is on pathogenic bacteria and the bacteriological and microscopic techniques. Two lectures and three laboratory hours weekly. Fall, annually. Venango Campus. Not for Biology majors.

BIOL. 341: GENERAL MICROBIOLOGY 4 s.h.

A study of microorganisms including viruses, fungi, and bacteria. Culturing, isolation, classification, and ecology of microscopic life from air, water, soil, and dairy products including beneficial and pathogenic forms. Two lectures and six laboratory hours weekly. Prerequisite: Biol. 203 and Chem. 154. Each semester.

BIOL. 351: FIELD BOTANY 3 s.h.

Collection and preparation of plants using herbarium methods. Emphasis on identification of flowering plants in a variety of habitats. Prerequisites: Biol. 153 and 154. Summers, on demand.

BIOL. 352: TAXONOMY OF VASCULAR PLANTS 3 s.h.

Systems of classification; collection and identification of flowering plants and ferns of the region; use of keys and herbarium collections. Prerequisites: Biol. 153 and 154. Spring, even numbered years.

BIOL. 353: ORNITHOLOGY 3 s.h.

An introduction to the biology of birds. Lectures deal with internal and external adaptation for aerial travel, classification, migration, habitats, plumage changes, nesting habits and ecologic relations. Two lectures and three laboratory or field trip hours weekly. Spring, even numbered years.

- BIOL. 354: ENTOMOLOGY 3 s.h.**
 A general study of insects including structure, physiology, classification, economic importance, and relationships. Two lectures and three hours of laboratory or field work weekly. Fall, even numbered years.
- BIOL. 356: FIELD ZOOLOGY — INVERTEBRATE 3 s.h.**
 A study of invertebrates of the field including the collecting and preserving of such forms. Emphasis will be placed on taxonomy and ecological relationships. Summers, on demand.
- BIOL. 357: FIELD ZOOLOGY — VERTEBRATE 3 s.h.**
 A study of the taxonomy and ecological importance of the vertebrates. Field trips will be taken to various ecological areas to observe and collect. Emphasis will be placed on the identification of living rather than preserving specimens. If Biol. 420 has been taken, permission of instructors of both courses must be secured to elect Biol. 357. Summers, on demand.
- BIOL. 360: PROBLEMS IN BIOLOGY 1-4 s.h.**
 Acquaints the student with skills and techniques used in research. The student identifies a problem for investigation and completes all phases of its study including the writing of a research report. Approval must be secured prior to preregistration from the staff member who will direct the student.
- BIOL. 400: SPECIAL TOPICS 1-6 s.h.**
 Advanced topics in various areas of biology. The format used will be selected by the professor as most suitable to the study. The course may be offered on request of students, subject to the availability of staff. Enrollment by consent of the instructor. On demand.
- BIOL. 401: RADIATION BIOLOGY 3 s.h.**
 A course presenting the fundamental aspects of the science of radiology with emphasis on biological applications. The topics studied are physical and genetic effects of radiation on plants and animals; radioactive fall-out and its biological consequences; application of radio-isotopes in biological research; and use of radiation sources and detectors. Prerequisite: One year of chemistry. Spring, annually.
- BIOL. 420: VERTEBRATE BIOLOGY AND SYSTEMATICS 3 s.h.**
 A survey course dealing with the various aspects of classification, evolutionary relationships, morphology, zoogeography, ethology, ecology, and physiology of vertebrates, with special reference to those from Pennsylvania. If Biol. 357 has been taken, permission of instructors of both courses must be secured to elect Biol. 420. Prerequisites: Biol. 153 and Biol. 202, or permission of the instructor. Spring, odd numbered years.
- BIOL. 424: FRESHWATER ICHTHYOLOGY 1 s.h.**
 Identification of families and species of fishes from the eastern United States, with emphasis on Pennsylvania forms. Two clock hours weekly. Prerequisite: Biol. 202. Fall, annually.
- BIOL. 425: FISHERIES BIOLOGY 3 s.h.**
 Ecology of fish populations; including taxonomy identification, age and growth, population estimation and analysis, food habits, management, and environmental requirements. Five clock hours weekly, including laboratory. Prerequisite: Environmental Biology or consent of the instructor. Fall, even numbered years.

BIOL. 442: MICROBIAL PHYSIOLOGY 4 s.h.

A study of the physiological reactions involved in the growth, reproduction, and death of microbes. Emphasis will be placed upon the metabolism of carbohydrates, proteins, vitamins, and fats. Enzymes, oxidation-reduction potentials, energy relationships, membrane potentials, and nutrients will be considered. Two lectures and four laboratory periods weekly. Prerequisites: Biol 341 and Chem. 453 or permission of the instructor. Spring, annually.

BIOL. 443: VIROLOGY 3 s.h.

A study of plant, animal, and bacterial viruses with emphasis on biochemistry, structure, life cycles, and disease-causing mechanisms. Three clock hours per week. Prerequisites: Chem. 453, Biol. 341, or consent of the instructor. Spring, annually.

BIOL. 444: IMMUNOLOGY 4 s.h.

An introduction to the fundamental concepts of immunology, immunochemistry, serology, and the role of immunology in epidemiologic studies. Three lectures and three laboratory periods weekly. Prerequisite: Biol. 341 or permission. Spring, annually.

BIOL. 446: PATHOGENIC MICROBIOLOGY 4 s.h.

A study of the bacteria, fungi, and viruses which cause human disease. Laboratory emphasis is on isolation and identification of pathogens and on elementary immunology. Two lectures and four laboratory hours weekly. Prerequisite: Biol. 341. Fall, annually.

BIOL. 451: ANIMAL PHYSIOLOGY 3 s.h.

Study of the comparative physiology of animals. Includes water and ion regulation, circulation, respiration, nutrition, nervous activity, endocrine functions, and responses to temperature, light, gases, and pressure. Two lectures and three hours laboratory weekly. Prerequisite: Biol. 203. Each semester.

BIOL. 452: PLANT PHYSIOLOGY 3 s.h.

Life processes and responses of plants to the environment. Synthesis, digestion, and assimilation of foods, mineral nutrition, absorption, translocation. Two lectures and three hours laboratory weekly. Prerequisite: Biol. 203. On demand.

BIOL. 453: PATHOPHYSIOLOGY I: ENDOGENOUS AGENTS 4 s.h.

The study of mechanisms by which disease occurs in humans. The course emphasizes responses to the disease process, and the effects of pathophysiologic mechanisms on the normality of cell, tissue, organ and system functions, and the response of the body to the disease process. Prerequisites: Prior courses in Physiology desired. Upper division nursing students, or two years of study in biology, or permission of instructor. Fall, annually.

BIOL. 454: PATHOPHYSIOLOGY II: EXOGENOUS AGENTS 4 s.h.

The study of mechanisms by which disease occurs in humans. Emphasis in this course is on disease related to heredity, physical, chemical, and biological stressors. Spring, annually.

BIOL. 455/555: ENDOCRINOLOGY 3 s.h.

A survey of the chemical and physiological principles of hormonal integrations in animals. Three hours lecture/week. Prerequisite: Biol. 451. Spring, annually.

BIOL. 460: COMPARATIVE VERTEBRATE MORPHOLOGY 3 s.h.

This course traces the most important trends in the evolution of basic structures in vertebrate lines, and conveys an appreciation of how the mammals came to possess the com-

bination of characters that make this group unique. Two lectures and three laboratory hours weekly. Prerequisites: Biol. 153, 154. Spring, even numbered years.

BIOL. 461: VERTEBRATE EMBRYOLOGY 3 s.h.

A descriptive study of the development of vertebrates, including early processes and the formation of organ systems. Two lectures and three laboratory hours weekly. Prerequisite: One year of biology. Spring, odd numbered years.

BIOL. 462: HISTOLOGY 3 s.h.

A study of the microscopic structure of tissues comprising the organ system of animals, including man. One lecture and two double-period laboratories. Prerequisite: One year of biology. Spring, annually.

BIOL. 464: DEVELOPMENTAL BIOLOGY 3 s.h.

A study of the major processes in development and their underlying mechanisms. Includes a descriptive study and mechanisms such as differentiation, induction, and morphogenesis. Materials deal primarily with animal development. Two lectures and three laboratory hours weekly. Prerequisites: Biol. 153, 154, 201, and General Chemistry. Fall, annually.

BIOL. 470: ANIMAL ECOLOGY 3 s.h.

A course dealing with the interrelationships of animals and their environment, including physical and biological factors. Discussions and investigations will include animal distribution, procuring food, escape from enemies, surviving climate extremes, species, diversity, reproduction, and community organization. Field and laboratory. Prerequisite: Biol. 202. Spring, even numbered years.

BIOL. 471: PLANT ECOLOGY 3 s.h.

A study of the structure, development, and causes of distribution of plant communities based upon individual studies of the major plants in each group. Emphasis upon plant associations in western Pennsylvania visited during the course. Prerequisite: Biol. 202. Fall semester, even numbered years.

BIOL. 472: PARASITOLOGY 3 s.h.

A study of parasites in relation to man and his domesticated animals. Emphasis is placed upon morphology and life histories in addition to the ecology of the parasite. Two lectures and three laboratory hours weekly. Fall, annually.

BIOL. 478: BIOME STUDIES 3 s.h.

A travel-study program which offers opportunities for study in the various biomes, e.g., grasslands, montane, seashore, etc. Summers, on demand.

BIOL. 482: EVOLUTION AND POPULATION GENETICS 3 s.h.

This course considers basic modern evolutionary theories. The effect of the changes of the earth's crust on the origin of life and the course of evolution is stressed, as well as variation and natural selection. Fall, odd numbered years.

BIOL. 491: BIOGEOGRAPHY 3 s.h.

The subject matter will cover aspects of the distribution of plants and animals. Main topics of concern will include interpretive approaches to biogeography, paleobiogeographic evidence of past distributions, the centers of origin of various groups, mechanics and routes of dispersal and colonization, and the dynamics of extinction. Prerequisites: Biol. 201 and Biol. 202 or permission of the instructor. Fall, odd numbered years.

A study of the biological concepts of animal behavior. An investigation of topics such as sensory receptors, internal mechanisms, genetics, learning and habituation, social organization, and communication. Laboratory exercises involve techniques of observation and experiments in animal behavior. Two lectures and three hours laboratory or field work weekly. Prerequisites: Biol. 153 or permission of the instructor. Fall, annually.

BUSINESS ADMINISTRATION

ACCOUNTING

ACTG 251: FINANCIAL ACCOUNTING 3 s.h.

A study of the principles and procedures for collecting, recording, summarizing, and reporting financial information. Each semester, summer.

ACTG 252: MANAGERIAL ACCOUNTING 3 s.h.

A study of the aspects of accounting that aid managers. Included are budgeting, cash behavior and systems, alternative choice decisions, international accounting aspects, and cash flow. Prerequisite: ACTG 151. Each semester, summer.

ACTG 253: FACTORY ACCOUNTING 3 s.h.

This course presents fundamental accounting concepts and techniques applied in record keeping and accounting control of the production process. Fall, annually, only at Venango Campus.

ACTG 254: PAYROLL ACCOUNTING

This accounting course provides detailed coverage of payroll policy, records, wage calculation, deductions, and government reporting with an emphasis on tax form preparation. Prerequisite: ACTG 252. Spring, annually, only at Venango Campus.

ACTG 255: FINANCIAL STATEMENT PREPARATION AND ANALYSIS 3 s.h.

This course focuses on procedures for financial statement preparation and the use of accounting information as a basis for decision making by management, owners, creditors, and other users of financial statements. Fall, annually only at Venango Campus.

ACTG 256: INCOME TAX PROCEDURES AND FORMS 3 s.h.

This course explains which types of income are taxable and which expenses are deductible. Both filling out and filing individual, partnership, and corporate tax returns will be covered. Prerequisite: ACTG 251. Spring, annually, only at Venango Campus.

ACTG 350: INTERMEDIATE ACCOUNTING 3 s.h.

A study of accounting theory and practice. Topics included are accounting for current assets, investments, plant and equipment, and intangibles. A special emphasis will be placed upon developing the student's technical and problem-solving ability. Prerequisite: ACTG 252. Each semester, summer.

ACTG 351: ACCOUNTING FOR EQUITIES 3 s.h.

A study of accounting theory and practice. Topics included are accounting for current and long-term liabilities, corporate equity, pension plans, long-term leases, income taxes,

changes in financial position, financial statement analysis, and price-level adjusted statements. A special emphasis will be placed upon developing the student's technical and problem-solving ability. Prerequisite: ACTG 350 or consent of instructor. Each semester, summer.

ACTG 352: COST ACCOUNTING, CONTROLS & ANALYSIS 3 s.h.

Basic consideration of cost principles, procedure, control and analysis. Cost accounting as a "tool" of management is stressed based on management information systems. Prerequisites: ACTG 251, 252. Each semester, summer.

ACTG 353: FEDERAL TAXES 3 s.h.

A study of federal income, estate, and gift taxation. Problems of compliance with the law by individuals, partnerships, corporations, estates, and trusts are considered. Prerequisite: ACTG 251. Each semester, summer.

ACTG 354: AUDITING 3 s.h.

A study of the purposes, the ethical and legal environment, financial analysis, and selected operational techniques of auditing. Prerequisite: ACTG 351. Each semester, summer.

ACTG 355: ADVANCED ACCOUNTING 3 s.h.

A consideration of modern development in accounting, including recent studies and pronouncements by accounting authorities such as the American Institute of Certified Public Accountants and the Securities and Exchange Commission. Included is a study of the problems of accounting for consolidations and partnership equity. A special emphasis will be placed upon developing the student's technical and problem-solving ability. Prerequisite: ACTG 351. Each semester, summer.

ACTG 451: ACCOUNTING PROBLEMS 3 s.h.

A problem-oriented study of topics most often tested on the CPA exam. Included are inventory methods, long-term contracts, partnership, leases, consignments, installment sales, receivership, fiduciary accounting, and governmental accounting. Preparations for the practice portion of the CPA exam are emphasized. Prerequisite: ACTG 355. Each semester.

ACTG 452: ADVANCED COST ACCOUNTING 3 s.h.

A study of advanced concepts of cost accounting as a means of providing useful quantitative information for decision making. Topics include inventory valuation, cost allocations, joint-product and by-product costs, process costing, accounting systems, profit center costs, and segment performance measuring. Prerequisite: ACTG 352. Each semester.

ACTG 453: PROBLEMS IN FEDERAL TAXATION ACCOUNTING 3 s.h.

Federal Income Tax concepts and compliance problems of partnerships, corporations, estates, and trusts. Also a brief consideration of the concepts of social security, estate, and gift taxation. Prerequisite: ACTG 353. Each semester.

ACTG 455: NOT-FOR-PROFIT ENTITIES 3 s.h.

A study of the principles and practices of budgeting and accounting for activities of entities that are operated for purposes other than making profits. Prerequisite: ACTG 351. Each semester.

ACTG 490:	CURRENT ACCOUNTING PRONOUNCEMENTS AND PRACTICE	3 s.h.
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A research study of current Financial Accounting Standards Board statements of standards, interpretations, concepts, exposure drafts and discussion memorandums. The internship experience and completed term paper will be discussed and integrated with the pronouncements. Prerequisite: Co-op 420, Accounting (internship), Spring, semester.

ACTG 499:	TAX TOPICS	3 s.h.
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Various current topics affecting accounting practice and the accounting profession will be studied. The topics will vary from year to year depending on the changes in such things as the current tax laws, announcements by the Financial Accounting Standards Board, the Securities and Exchange Commission, the various committees of the American Institute of CPA's, the Cost Accounting Standards Board and other such bodies which promulgate the standards and conduct of professional accountants. Prerequisites: Senior standing and twenty-one (21) hours of accounting course work. Spring semester.

ECONOMICS

ECON. 175:	ECONOMICS OF FREE ENTERPRISE AND PUBLIC POLICY	3 s.h.
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A basic introduction into the history of economics as a social science, the theory and application of microeconomics and macroeconomics, international economics, and economic alternatives in current social problems. This is a freshman level course and can be used only as general education elective in either the associate degree program or the baccalaureate degree programs. Majors in the school of business administration are excluded from the course. Each semester.

ECON 211:	PRINCIPLES OF MACROECONOMICS	3 s.h.
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Introduction to macroeconomics, national income analysis, money and banking, monetary and fiscal policies, inflation, and unemployment. Note: ECON 211 and 212 may be taken in either sequence. Each semester.

ECON 212:	PRINCIPLES OF MICROECONOMICS	3 s.h.
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Introduction to microeconomics, consumer behavior and demand, organization of production, market structures and the pricing of inputs and outputs, international economics. Note: ECON 211 and 212 may be taken in either sequence. Each semester.

ECON 221:	ECONOMIC AND BUSINESS STATISTICS I	3 s.h.
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Topics covered are descriptive statistics, probability, probability distributions, mathematical expectation, sampling distributions, determination of sample size, and Bayesian decision theory. Application of these statistical techniques in the areas of business and economics will be emphasized. Prerequisite: College Algebra or equivalent. Each semester.

ECON 222:	ECONOMIC AND BUSINESS STATISTICS II	3 s.h.
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Topics covered are confidence intervals, hypothesis testing, the chi-square distribution, analysis of variance, regression and correlation, time series and index numbers. Application of these techniques in the areas of business and economics is emphasized. Prerequisite: Econ. 221. Each semester.

ECON. 310:	INTERMEDIATE MICROECONOMIC THEORY	3 s.h.
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The behavior of consumers, producers, and the economic theory of price and output

determination in commodity and resource markets. Prerequisites: ECON 212, MATH 172 or 232, or equivalent. Each semester.

ECON 311: INTERMEDIATE MACROECONOMIC THEORY 3 s.h.

National income accounting and analysis, theories of consumption and investment expenditures, the role of money in a dynamic economy, economic growth, and public policy. Prerequisite: ECON 211. Fall, annually

ECON 312: COMPARATIVE ECONOMIC SYSTEMS 3 s.h.

Analysis of alternative patterns of economic control, planning, and market structure. Experiences under capitalism, socialism and mixed economics are compared and evaluated. Prerequisites: Econ. 211 and 212. Fall, biennially.

ECON 314: URBAN AND REGIONAL ECONOMICS 3 s.h.

Introductory subnational economics. Focuses upon problems of economic stability, growth and the distribution of income. Includes elementary trade theory, location theory, systems of cities, land use changes, economic accounting systems and public sector economics. Prerequisites: Senior standing or consent of instructor. Spring, biennially.

ECON 340: GOVERNMENT REGULATIONS 3 s.h.

An examination of the major economic problems arising from public interest in competition, business practices, and labor. The anti-trust laws and regulations are included. Prerequisites: Econ. 211 and 212. Spring, biennially.

ECON 341: PUBLIC UTILITIES 3 s.h.

An analysis of public policies and methods regarding industries with a public interest with emphasis on transportation, power and communication. The study of legal and financial aspects of public utilities are part of this course. Prerequisites: Econ. 211 and 212. Fall, biennially.

ECON 351: LABOR ECONOMICS 3 s.h.

A study of union history, structure, and functions in the United States economy. Collective bargaining, labor laws, and government policies toward labor are included. Management reaction to organized labor unions and related labor problems are stressed. Prerequisites: Econ. 211 and 212. Fall, annually.

ECON. 361: INTERNATIONAL ECONOMIC RELATIONS 3 s.h.

Theory and practice of international trade. Balance of payments, foreign exchange, national commercial policies, international investment, and foreign aid are considered. Prerequisites: Econ. 211 and 212. Fall, annually.

ECON 370: MONEY AND BANKING 3 s.h.

Nature and origins of money; the commercial banking system and money creation; central banking and the Federal Reserve System; monetary policy and domestic and international economic stability. Prerequisites: Econ. 211 and 212. Spring, annually.

ECON 371: PUBLIC FINANCE 3 s.h.

Public sector activity and its impact upon resource allocation, income distribution, economic stabilization and economic growth. Financing public sector activity at the federal, state and local level. Nature and origin of public debt and debt management problems. Prerequisites: Econ. 211 and 212. Fall, annually.

ECON 410: MANAGERIAL ECONOMICS**3 s.h.**

Use of economic analysis in the formulation of business policies. Decision theory and criteria for decision-making by the firm; output and "scale" decisions; linear programming; profits, production functions and cost functions; competitive equilibrium (industry and firm); demand theory, pricing policies, capital budgeting and investment; uncertainty; inventory management. Prerequisites: Econ. 222, 310 and ACTG 152. On demand.

ECON. 423: STATISTICAL TOOLS FOR QUANTITATIVE ANALYSIS**3 s.h.**

Application of the statistical methods of probability, sampling, estimation, analysis of variance, regression, and correlation in the areas of economics and business. Prerequisite: Econ. 222. Spring, biennially.

ECON 470: BUSINESS CYCLES AND FORECASTING**3 s.h.**

Theories of business fluctuations; applications of modern income theory to business cycles; examination of business cycle indicators and forecasting techniques. Prerequisites: ECON 211 and 222, or consent of instructor. Spring, annually.

ECON 490: HISTORY OF ECONOMIC THOUGHT**3 s.h.**

Development of economic ideas from ancient times to the present. Emphasis upon the period from Adam Smith onward. Considers the economic and political environment in which ideas emerged as well as the leading economists advancing or defending the ideas. Prerequisites: Econ. 211 and 212 and senior standing. Spring, annually.

ECON 491: INDEPENDENT STUDIES IN ECONOMICS**1-3 s.h.**

Opportunity to explore in depth a problem or area of economics, according to the student's interest, under the direction of a faculty member of the Department. Prerequisite: 2.75 grade point average and consent of both instructor and department head. Maximum credit granted in Econ. 491 is 6 credits.

FINANCE

FIN 370: FINANCIAL MANAGEMENT**3 s.h.**

A study of the theoretical and analytical framework that a financial manager can use to make decisions in a dynamic economy. Planning the need for funds, acquiring funds, and efficiently utilizing those funds in domestic and multinational firms are some of the topics covered. Prerequisites: ECON 212 and ACTG 252. Each semester, summer.

FIN 373: FUNDAMENTALS OF INSURANCE**3 s.h.**

A survey of the principal methods of handling risk with particular attention to the various types of insurance and how they relate to business and personal affairs. Insurance areas covered will include Life, Accident and Health, Social, Fire and Allied Lines, Transportation Casualty and Surety. Principles of selecting insurance for the firm and private citizen will be discussed. Fall, annually.

FIN 374: PROPERTY AND CASUALTY INSURANCE**3 s.h.**

Treatment of property and liability exposures by application of coverages — fire and allied lines; inland and ocean marine, and casualty and surety bonding. Attention will be paid to rating, underwriting, loss preventing, claims administration and corporate risk management. Spring, annually.

FIN 375: MANAGEMENT OF FINANCIAL INSTITUTIONS 3 s.h.

A descriptive analysis of the operations of financial institutions, such as commercial banks, savings banks, insurance companies. Examines techniques and principles involved in the management of financial institutions. Prerequisites: one course in Macro-economics; FIN 370, or consent of instructor. Spring, annually.

FIN 376: SECURITY MARKETS 3 s.h.

Analysis of the organization and operation of stock and bond markets; security speculations; brokerage houses, exchange relations with other institutions; security price behavior; exchange regulation; and risk types and returns from securities. Prerequisite: FIN 370. Fall, annually.

FIN 471: FINANCIAL PROBLEMS 3 s.h.

A consideration by the case method of the financial problems of business firms. Prerequisite: FIN 370. Fall, annually.

FIN 473: RETIREMENT AND ESTATE PLANNING 3 s.h.

A study of both retirement and estate planning, including an in-depth look at pensions, profit-sharing, and other deferred compensation plans, trusts, bequests and tax laws. Prerequisites: FIN 373 and 476. Once annually.

FIN 476: SECURITIES ANALYSIS 3 s.h.

A study of securities as an investment device, and the study of techniques of analysis used in selecting securities. Prerequisite: FIN 370. Spring, annually.

FIN 480: MULTINATIONAL FINANCIAL MANAGEMENT 3 s.h.

The theory and practice of financial management in the multinational firms; focuses on important differences between domestic and international financial decision making. Prerequisite: FIN 370 and an international business course. Once annually.

MANAGEMENT

MGMT 120: INTRODUCTION TO BUSINESS 3 s.h.

An introductory course which emphasizes the philosophical and historical background of business institutions, the functional relationship within the business firms, and relates the firm to the overall framework of society. Freshmen only. Recommended for business students who have not selected a specific major. Required for the A.A. Degree at Venango Campus. Each semester.

MGMT 121: FUNDAMENTALS OF MANAGEMENT 3 s.h.

This course is an introduction to management and organization. The emphasis is placed on managerial processes and functions and the interface of the manager with superiors, subordinates, and the work environment. Each semester annually only at Venango Campus.

MGMT 227: APPLIED SUPERVISION 3 s.h.

This course is designed to prepare the student for a position as a first-time supervisor and includes the essential elements of a good management practices, and stresses application rather than theoretical supervision concepts. Prerequisite: Sophomore standing and MGMT 120. Spring, annually only at Venango Campus.

MGMT/PSY 228: HUMAN BEHAVIOR IN ORGANIZATIONS**3 s.h.**

This course is a survey of the application of psychological theory, techniques, and research to organizations. The psychological principles of selection, training, attitudes, motivation, job satisfaction, job evaluation, and performance are analyzed. Fall, annually only at Venango Campus.

MGMT 320: PRINCIPLES OF MANAGEMENT**3 s.h.**

This course focuses on the development of management thought and its application. Topics covered include the functions of planning, organizing, controlling, coordinating, and directing human, material, and capital resources. Special areas to be considered are the domestic and international environment, and changing societal values. Prerequisite: Junior standing. Each semester.

MGMT 321: ORGANIZATION THEORY AND BEHAVIOR**3 s.h.**

A theoretical development of the relationship between organizational effectiveness, organizational design, and organizational resources. The perspective is that of the administrator and focuses on managerial variables. Prerequisite: MGMT 320. Each semester.

**MGMT 322: SELECTION AND MANAGEMENT OF BUSINESS
INFORMATION SYSTEMS****3 s.h.**

This course shows a manager how to develop business management information systems, either on his own or with the aid of system technicians. It stimulates the systems techniques in organizing and analysis which the student will use in practice. Prerequisite: MGMT 320. Spring, annually.

MGMT 323: PROBLEMS IN SMALL BUSINESS**3 s.h.**

The study of the problems of initiating and operating a small business. Emphasis is on the use of existing data and sources of information available to the small businessman as well as formal knowledge of course work. Prerequisite: MGMT 320. Fall, annually.

MGMT 324: PERSONNEL MANAGEMENT**3 s.h.**

Manpower recruiting, selecting, testing, and training; comprehension theory, policies, and practices, motivation through job enlargement, leadership style, counseling, and disciplinary practices. Prerequisite: MGMT 320. Each semester.

MGMT 325: MANAGEMENT SEMINAR**3 s.h.**

Designed for management majors as a follow-up course to Principles of Management. The course presents the views of numerous management theorists and practitioners. It includes broad ranging areas of study and an integration of these areas through discussion, individual written and oral reports, and some case analyses. The student has the opportunity to analyze and integrate theory and practice as a means of increasing his understanding of the management process. Prerequisite: Senior standing. Spring, annually.

MGMT 420: OPERATIONS RESEARCH I**3 s.h.**

Scientific methods which provide executive departments with a quantitative basis for making decisions. Emphasis is placed on deterministic methods such as the transportation problem, linear programming, dynamic programming and PERT. Prerequisite: Econ. 221. Fall, annually.

MGMT 421: OPERATIONS RESEARCH II**3 s.h.**

Scientific methods which provide executive departments with a quantitative basis for making decisions. Emphasis is placed on stochastic processes such as inventory control,

MKTG 361:	MARKETING MANAGEMENT	3 s.h.
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MKTG 362:	RETAILING MANAGEMENT	3 s.h.
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MKTG 363:	ADVERTISING MANAGEMENT	3 s.h.
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MKTG 364: SALESMANSHIP 3 s.h.

MKTG 365: INDUSTRIAL MARKETING 3 s.h.

MKTG 366: PHYSICAL DISTRIBUTION MANAGEMENT 3 s.h.

MKTG 460: SALES MANAGEMENT 3 s.h.

MKTG 461: MARKETING RESEARCH 3 s.h.

MKTG 465: MARKETING PROBLEMS 3 s.h.

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MKTG 468: CONSUMER BEHAVIOR 3 s.h.

The study of theories, models, recent research and research techniques in consumer motivation and decision making. Prerequisite: MKTG 360 and Psy. 211 or permission of the instructor. Each semester.

OFFICE MANAGEMENT

OFMT 131: COLLEGE TYPING 2 s.h.

Emphasis is placed on typing speed and accuracy. Production work includes manuscripts, rough drafts, centering, tabulation, and business letters and forms. Offered only on Venango Campus. Fall, annually.

OFMT 132: PRODUCTION TYPING 3 s.h.

Emphasis is upon speed and the production of mailable work from rough drafts and unarranged office problems. Prerequisite: College Typing or demonstrated equivalency. Offered only at Venango Campus. Spring, annually.

OFMT 135: COLLEGE SHORTHAND 3 s.h.

Dictation and practice in writing shorthand with emphasis on transcription speed and accuracy. Offered only on Venango Campus. Fall, annually.

OFMT 136: EXECUTIVE SHORTHAND 3 s.h.

Course designed to develop further speed in dictation and transcription of unfamiliar materials, using vocabulary from various business fields. Mailable transcripts emphasized. Prerequisite: College shorthand or demonstrated equivalency. Offered only on Venango Campus. Spring, annually.

OFMT 221: OFFICE MANAGEMENT 3 s.h.

A system-oriented approach toward the planning, organizing, directing, and controlling general office activities to include all office equipment and electronic data processing tasks as well as office personnel. Offered only on Venango Campus.

OFMT 230: OFFICE PROCEDURES 3 s.h.

Emphasis is on office duties handled by clerical workers. Students will perform office duties such as typing, handling mail, simple bookkeeping, filing, and preparing reports. Recent changes in the field will be studied, as well as changes in attitudes toward personnel. Prerequisite: at least one semester of typing at the high school or college level. Offered only on Venango Campus. Fall, annually.

OFMT 231: OFFICE PRACTICE 3 s.h.

Emphasis will be on developing and improving skills used by an executive secretary. The course will consist of a simulation including typing reports, letters, and memos from rough drafts, research for report preparation, composing letters and news releases, preparing itineraries, and making travel arrangements. A records management simulation is included. Offered only on Venango Campus. Spring, annually.

REAL ESTATE

Real Estate Fundamentals and Real Estate Practice are required by the Pennsylvania Real Estate Commission to prepare for the real estate salesperson licensure examination. All of the

below real estate courses can be used to meet the educational requirements of the real estate brokerage licensure examination.

RE 270: REAL ESTATE FUNDAMENTALS 3 s.h.

This course is designed as an introduction to the broad area of Real Estate. It seeks to lay a foundation of important principles from which a study in depth may be launched. Each semester.

RE 271: REAL ESTATE PRACTICE 3 s.h.

This course examines the role of the agent in the real estate market, the legal and ethical aspects of brokerage, the real estate marketing process, and specialized fields in the real estate business. Prerequisite: Consent of the instructor. Each semester.

RE 272: REAL ESTATE LAW 3 s.h.

This course covers the legal relationships and legal instruments involved in listing and selling real property. Prerequisite: RE 270 or consent of instructor. Each semester.

RE 371: REAL ESTATE FINANCE 3 s.h.

This course is a study of the methods of financing the purchase of real estate, with a brief look at real estate as investment opportunities. Prerequisite: RE 270, or consent of the instructor. Fall, annually.

RE 372: BROKERAGE OF REAL ESTATE 3 s.h.

Brokerage of Real Estate deals with the relationship between: the broker, his client, and the customer; the broker and his salesman; and the broker and the public at large. The realtor and his ethics are stressed. Prerequisite: RE 270, or the consent of the instructor. Spring, annually.

RE 470: APPRAISAL OF REAL ESTATE 3 s.h.

This course is designed to introduce the principles of real estate appraisal to the students. It will include all methods used to appraise real property, and will include both residential and commercial real estate. It is designed to be useful to anyone considering a career in real estate sales and/or real estate appraisal work. The student will have the opportunity to participate in actual real estate appraisals. Prerequisite: RE 270, or the consent of the instructor. Fall, annually.

RE 471: REAL ESTATE INVESTMENT ANALYSIS 3 s.h.

This course provides the background necessary to evaluate alternative income-producing real estate investments. Real estate as an investment media will be analyzed in terms of financial and non-financial considerations. The rate of return and inflation-hedge characteristics of real estate investing will be considered in light of risk, illiquidity, and federal tax consequences. Prerequisites: RE 270 and 271, or FIN 370, or consent of the instructor. Once annually.

SPECIALIZED COURSES

BSAD 225: HUMAN RELATIONS IN BUSINESS 3 s.h.

The influence that personnel practices, motivational techniques, organizational tech-

niques, and organizational structures have on human behavior and relations are studied. The course objective is to stress practical applications of organization and behavior theory
Prerequisite: MGMT 120; Fall, annually.

BSAD 240: LEGAL ENVIRONMENT I 3 s.h.

Legal Environment I is a survey course of law and society. Its purpose is to orient students to the judicial systems of the United States and the legal remedies and mechanisms at their disposal. It compares and contrasts both civil and equitable court functions through the illustrations of common law contracts, torts, criminal law, property law and the administration of decedents' estates. Each semester.

BSAD 241: LEGAL ENVIRONMENT II 3 s.h.

This course is an application of the concepts attained in BSAD 240, Legal Environment I, in a business context. Emphasis is placed on general substantive business law topics, i.e.: agency, partnerships, corporations, sales, negotiable instruments; and real property. Each semester.

BSAD 437: INTERNATIONAL BUSINESS SEMINAR 3-6 s.h.

The focus of this course is on developing an understanding of the problems and opportunities faced by international organizations. In order to best achieve both micro and macro perspectives in the study of international aspects of the business, students enrolled will visit businesses abroad for discussions with top-level executives. An established international program, the International Business Seminar will be incorporated as the major portion of the course. In addition to the international travel, the students will meet with the instructor for a series of briefing and debriefing sessions.

Requirements for the successful completion of three credits include attending the briefing and debriefing sessions, attending and participating in the international seminar meetings, reading the provided seminar text, and writing a report. An additional three credits may be taken (for a total of 6) on an individualized basis. The student must meet with the instructor to arrange the reading assignments and other obligations such as tests and term papers. Normally the additional three credits are taken in the field of the student's particular area of interest and in the instructor's area of expertise. Prerequisite: MGMT 320. Open only to juniors and seniors. Offered at special times between the regular school semesters.

BSAD 490: ADMINISTRATIVE DECISION MAKING 3 s.h.

This course requires the student to synthesize what had been learned in the separate business fields and to utilize this knowledge in the analysis of complex problems of various businesses — from single proprietorships to multinationals. This is the capstone course for a degree in business administration. Prerequisite: Business Administration major and senior standing. Each semester.

BSAD 491: INDEPENDENT STUDIES IN BUSINESS 1-3 s.h.

Opportunity to explore in depth a problem or area of business under the direction of a faculty member of the college. Prerequisite 2.75 grade point average and consent of both instructor and department head. Maximum credit granted in BSAD 491 is 6 credits Each semester.

BSAD 494: BUSINESS EXECUTIVE'S LECTURE 1 s.h.

The course is designed to introduce the student to successful business practices. The course will call upon several prominent business men/women from the local area to give a

series of lectures concerning their business philosophies and practices. The course will assist the student in bringing together knowledge attained from the business curriculum, giving him ideals as to its practical applications. Prerequisite: MGMT 320. Each semester.

CHEMISTRY

CHEM. 050: PREPARATION FOR CHEMISTRY 3 s.h.

This course is intended for students who may not have sufficient background for college chemistry. Placement in this course will be recommended by the Chemistry Department based on high school record and test scores. Emphasis will be on developing verbal and mathematical skills, abstract reasoning, and a basic scientific vocabulary. The credits for this course do not count toward graduation. Fall, annually.

PH. SCI. 111: BASIC PHYSICAL SCIENCE: CHEMISTRY 3 s.h.

This course is intended for non-science majors and does not assume familiarity with chemistry. It does not count toward requirements for science majors, but can be applied to fulfill the general education math-science requirements for non-science majors.

Selected chemical principles are explored with the purpose of providing a background that will enable the student as a citizen to understand issues involving the interaction of science and society; brief experiments are often included. Students who prefer a more traditional chemistry course may elect either Chemistry 151 or 153 to fulfill their general education requirements. No prerequisites. Each semester.

CHEM. 151: CHEMICAL PRINCIPLES* 4 s.h.

Intended for chemistry majors, pre-medical students, and others who desire a rigorous introductory course. Chem. 151 and 152 comprise the foundation for all subsequent courses in the major sequence. Principal topics include atomic theory, gases, solids, and liquids. A strong background is desirable but not required. Students must concurrently schedule Chem. 161. Four hours lecture. Fall, annually.

CHEM. 152: CHEMICAL PRINCIPLES II* 4 s.h.

Continuation of Chem. 151. Principal topics include second law, equilibrium, acids and bases, electrochemistry, kinetics, radiochemistry, and some descriptive chemistry. Prerequisite: Chem. 151. Students must concurrently schedule Chem. 162. Four hours lecture. Spring, annually.

CHEM. 161: CHEMICAL PRINCIPLES LABORATORY I 1 s.h.

Laboratory exercises to exemplify and augment the material in Chem. 151. This course must be taken concurrently with Chem. 151 unless it is being repeated. Three hours laboratory. Fall, annually.

CHEM. 162: CHEMICAL PRINCIPLES LABORATORY II 1 s.h.

Laboratory exercises to exemplify and augment the material in Chem. 152. This course must be taken concurrently with Chem. 152 unless it is being repeated. Three hours laboratory. Fall, annually.

CHEM. 153: GENERAL CHEMISTRY I* 3 s.h.

This is the initial course in the fundamental concepts of chemistry for students not major-

*No student may take, for credit, a chemistry course at the 100 level after having successfully completed any chemistry course numbered 300 or above.

ing in chemistry; it can serve as a preparation for Chem. 254 or as a terminal course. The major topics included are atomic theory and structure, stoichiometry, chemical bonding, and the physical states of matter. Must be taken concurrently with Chem. 163. Three hours lecture. Fall, annually.

CHEM. 154: GENERAL CHEMISTRY II* 3 s.h.

Continuation of Chem. 153. This course includes a discussion of mixtures, thermodynamics equilibria, kinetics, acids and bases, oxidation-reduction, and radioactivity. Must be taken concurrently with Chem. 164. Prerequisite: Chem. 153. Three hours lecture. Spring, annually.

CHEM. 163: GENERAL CHEMISTRY LABORATORY I 1 s.h.

Laboratory exercises to exemplify and augment the material in Chem. 153. This course must be taken concurrently with Chem. 153 unless it is being repeated. Three hours laboratory. Fall, annually.

CHEM. 164: GENERAL CHEMISTRY LABORATORY II 1 s.h.

Laboratory exercises to exemplify and augment the material in Chem. 154. This course must be taken concurrently with Chem. 154 unless it is being repeated. Prerequisites: Chem. 153, 163. Three hours laboratory. Spring, annually.

CHEM. 205: NUTRITION 3 s.h.

An introduction to the basic principles of human nutrition. The structure of proteins, fats, carbohydrates, vitamins and minerals and their role in metabolism are explored. Nutritional needs of various age groups, nutrition and disease, and recent research in nutritional problems are discussed. Required of all B.S. Nursing majors. Prerequisite: one semester of general chemistry or consent of instructor.

CHEM. 211: SCIENCE AND SOCIETY 3 s.h.

A major goal of this course is to equip the citizen to make intelligent choices and to take effective action in areas where science or technology appear to pose threats, offer benefits, demand funding, or require regulation. For this purpose, and for the additional goal of achieving a minimum level of scientific literacy, the needed technical principles are presented in non-mathematical fashion. Emphasis is placed on the similarities and differences between life and other chemical processes, and on the consequences of the Second Law of Thermodynamics. Open to students in all academic areas. Prerequisite: Sophomore standing. Three hours lecture. Fall, annually.

CHEM. 251: ORGANIC CHEMISTRY I 3 s.h.

The study of bonding, structure, stereochemistry, nomenclature, and the mechanisms of free radical substitution, nucleophilic substitution, electrophilic addition and electrophilic aromatic substitution. Organic syntheses, reactions and methods will be emphasized. Students must concurrently schedule Chem. 261. Prerequisites: Chem. 151, 152 or 153, 154. Three hours lecture. Fall, annually.

CHEM. 252: ORGANIC CHEMISTRY II 3 s.h.

A continuation of Chem. 251. A discussion of functional groups, their preparation and reactions. Synthesis and mechanisms will be emphasized. Students must concurrently schedule Chem. 262. Prerequisite: Chem. 251. Three hours lecture. Spring, annually.

*No student may take, for credit, a chemistry course at the 100 level after having successfully completed any chemistry course numbered 300 or above.

CHEM. 257: SPECTROSCOPIC IDENTIFICATION OF ORGANIC COMPOUNDS

2 s.h.

The application of modern spectroscopic techniques to the determination of the structures of organic compounds is explained. Techniques such as infrared, nuclear magnetic resonance, and mass spectroscopy are discussed with emphasis on their application toward the elucidation of structures of organic compounds. Necessary theoretical background and practical applications are presented. Required of all chemistry majors and must be taken concurrently with Chem. 252. Prerequisites for other students: Chem. 254, 264 and consent of instructor.

CHEM. 261: ORGANIC CHEMISTRY LABORATORY I

1 s.h.

The laboratory will consist of experiments using important techniques, natural product isolation and synthesis using modern instrumental methods. This course must be taken concurrently with Chem. 251 unless it is being repeated. Three hours laboratory. Fall, annually.

CHEM. 262: ORGANIC CHEMISTRY LABORATORY II

1 s.h.

This laboratory will consist of complex synthesis and organic qualitative analysis both using modern instrumentation. The important spectroscopic methods of infrared and nuclear magnetic resonance spectroscopy and mass spectrometry will be emphasized. This course must be taken with Chem. 252 unless it is being repeated. Prerequisite: Chem. 261. Six hours laboratory. Spring, annually.

CHEM. 254: INTRODUCTORY ORGANIC CHEMISTRY

3 s.h.

A modern course which surveys the entire field of elementary organic chemistry, both aliphatic and aromatic, with emphasis on nomenclature, simple reactions and mechanisms, and the structure of organic compounds, together with their relation to biology. This course does not count toward the requirements for a major in chemistry and must be taken concurrently with Chem. 264 unless it is being repeated. Prerequisites: Chem. 152 or 154. Three hours lecture. Each semester.

CHEM. 264: INTRODUCTORY ORGANIC CHEMISTRY LABORATORY

1 s.h.

Important techniques, synthesis and functional group analyses of organic compounds. This course must be taken concurrently with Chem. 254 unless it is being repeated. Three hours laboratory. Each semester.

CHEM. 255: INDUSTRIAL CHEMISTRY

3 s.h.

This course deals with the application of theories, laws, and calculations of chemistry to industrial processes. This work is supplemented by reading of current literature and trips to chemical industries. Prerequisites: Chem. 151, 152, or 153, 154. Offered occasionally.

CHEM. 270: CHEMICAL INFORMATION

1 s.h.

This course covers sources, organization, and the effective use of chemical information. Aspects of both printed and computer based chemical information sources will be discussed. Problem assignments will provide illustration and practice in effective searching of the chemical literature. Co-requisite: Chem. 251, 261. Fall, annually.

CHEM. 320: APPLICATIONS OF COMPUTERS IN CHEMISTRY

3 s.h.

This course is concerned with the application of computers in chemistry. After a review of the scientific programming languages, attention will be focused on the use of computer methods for problem solving in such areas as theoretical, analytical, and organic chemistry. Coverage will include data acquisition methods, experimental controls, chemical structure elucidation, and chemical information retrieval methods. Prerequisites: Chem. 152 or 154, and Comp. Sci. 201 (may be taken concurrently).

TECHNIQUES AND INSTRUMENTS I-V

Utilizing the department's extremely complete line of modern equipment, this sequence of laboratory-centered courses has been designed to develop or reinforce skills, techniques, theories, and familiarity with instruments used in all branches of chemistry. There is a progression from those operations and concepts that are essential in many areas, including biological sciences, to those that are somewhat specialized but yet of considerable importance to most chemists. The last courses in the sequence permit some individual choice of topics.

The following are representative of the total content: classical wet analytical techniques, quantitative spectrophotometry, calorimetry, electrochemistry, glass-blowing, vacuum-line operations, thermodynamic and kinetic studies, electronic data processing, characterization of macro-molecules, surface studies, molecular and crystal structure determinations by diffraction and spectral methods, quantitative separations, electro-analytical methods, nuclear magnetic resonance, radiochemical techniques, syntheses, basic electronic circuitry.

Course details and prerequisites are listed below.

CHEM. 351: INTRODUCTION TO TECHNIQUES AND INSTRUMENTS 3 s.h.

The theory and applied techniques and instrumentation of analytical chemistry for majors in the allied health professions. Some of the topics included are spectrophotometry, methods based on equilibrium systems, electroanalytical methods and separation procedures as applied to health professions. This course does not count toward the requirements for a major in chemistry. Students must concurrently schedule Chem. 361. Prerequisite: Chem. 152 or 154. Three hours lecture. Spring, annually.

CHEM. 352: TECHNIQUES AND INSTRUMENTS I 4 s.h.

This course serves students both in chemistry and in related fields. Prerequisites: Chem. 152 or 154. Two hours lecture, six hours laboratory. Fall, annually.

CHEM. 356: TECHNIQUES AND INSTRUMENTS II 2 s.h.

Prerequisite: Chem. 354. This course will normally be taken concurrently with Chem. 355. Six hours laboratory. Spring, annually.

CHEM. 357: TECHNIQUES AND INSTRUMENTS III 3 s.h.

Prerequisites: Chem. 352, 354; Chem. 355 concurrently, or consent of department. Two hours lecture, three hours laboratory. Spring, annually.

CHEM. 361: INTRODUCTION TO TECHNIQUES AND INSTRUMENTS LABORATORY 1 s.h.

Laboratory exercises to exemplify and augment materials in Chem. 351. This course must be taken concurrently with Chem. 351 unless it is being repeated. Three hours laboratory. Spring, annually.

CHEM. 461: TECHNIQUES AND INSTRUMENTS IV 2 s.h.

Prerequisite: Chem. 357. One hour lecture, three hours laboratory. Fall, annually.

CHEM. 354: PHYSICAL CHEMISTRY I 4 s.h.

This course is concerned primarily with the principles of thermodynamics. Kinetics is discussed in the latter portion of the term. The laws of thermodynamics are applied to many problem solving situations. Calculus is used heavily, and a basic familiarity with the handling of simple differentials and integrals is necessary. Kinetics is treated from experimental and mechanistic points of view. Prerequisites: Chem. 152, 162; Physics 252 or 259; Math. 271. Four hours lecture. Fall, annually.

CHEM. 355: PHYSICAL CHEMISTRY II

4 s.h.

Both the classical wave formulation and the concept of operators are developed as approaches to the study of quantum mechanics, and simple one-electron problems are solved. This groundwork is then extended to molecular problems. Spectroscopy is examined in detail, particularly as a tool in the determination of molecular structures. Powder and single-crystal x-ray diffraction techniques are discussed and their use as research tools investigated. Prerequisite: Chem. 354. Four hours lecture. Spring, annually.

CHEM. 359: ADVANCED ORGANIC CHEMISTRY

3 s.h.

A study of reaction mechanism, synthetic methods, and structure elucidations. Emphasis is placed on correlation of structure, and reactivity and on stereochemistry. Prerequisites: Chem. 252, 355. Three hours lecture. Fall, annually.

CHEM. 453: BIOCHEMISTRY

3 s.h.

An introduction to modern cellular biochemistry. A study of proteins, enzymes, nucleic acids and fats; the metabolic transformations of amino acids, carbohydrates, lipids, protein synthesis and photosynthesis; and the respiratory chain and oxidation phosphorylation. Prerequisite: Chem. 251 or 254. Three hours lecture. Spring, annually.

CHEM. 455: ADVANCED PHYSICAL CHEMISTRY

3 s.h.

This course is concerned primarily with statistical mechanics and additional aspects of quantum mechanics. Prerequisite: Chem. 355. Offered occasionally.

CHEM. 456: ADVANCED INORGANIC CHEMISTRY

3 s.h.

Various concepts of bonding, encountered in previous courses, are extended and compared to gain some appreciation of their uses and shortcomings. Considerable attention is given to steric relationships in many environments. The descriptive chemistry includes recently discovered compound types as well as the classical period-group — subgroup patterns of behavior. Prerequisite: Chem. 355 (may be taken concurrently) or consent of department. Three hours lecture. Spring, annually.

CHEM. 459: DEMONSTRATIONS IN CHEMISTRY

3 s.h.

Studies are made of various demonstration techniques with students devising and applying each with many examples. Special attention is given to the study of the material of the Chem. Study Committee of the American Chemical Society prepared for the purpose of vitalizing high school chemistry courses. Prerequisites: Chem. 151, 152, and at least one other major course. Offered occasionally.

CHEM. 460: RADIOCHEMISTRY TECHNIQUES

2 s.h.

A general course dealing with radioactive materials, their radiations, preparation of isotopes in various chemical forms, detection, identification and applications. Aspects of safety and basic laws and regulations are stressed. Emphasis is placed on nuclear instrumentation, including G.M., scintillation and gas flow counting techniques. Work with a neutron howitzer, including basic activation analysis with its associated gamma ray spectroscopy, is studied. Prerequisites: Chem. 152 or 154; Math. 151 or 171. One hour lecture, three hours laboratory. Offered occasionally.

CHEM, 465, 468: CHEMICAL RESEARCH

1-3 s.h. each

An independent laboratory problem in some field of chemistry of special interest to the student. Admission only by consent of the instructor and the approval of the Department Chairman. Prerequisites: Chem. 355, 357. Each semester.

CHEM. 470: CHEMICAL LITERATURE AND SEMINAR 1-2 s.h

Search of the chemical literature on a topic of current interest, compilation of a bibliography, preparation of an abstract, presentation of oral reports and on-line computer searches of the literature. Prerequisites: Chem. 252, 355. Spring, annually.

CHEM. 471: SPECIAL TOPICS IN CHEMISTRY 3 s.h

Topics of current interest in the field of chemistry will be presented. The choice of topics will vary from year to year, but the subject areas each year will include topics from three different areas. Topics such as non-aqueous solvents, solid state chemistry, polymers, chemical physics, group theory, stereochemistry, organometallics and recent developments in spectroscopy will be discussed. Prerequisite: Chem. 355 (may be taken concurrently). Offered occasionally.

CHEM. 485: PROBLEMS IN CHEMISTRY EDUCATION 1-3 s.h.

An opportunity to explore in depth a problem area in chemistry education according to the student's need or interest under the direction of a faculty member. Admission only by consent of the instructor and the approval of the Department Chairman. Prerequisites: Junior standing, or consent of the Department. Not open to Chemistry majors in the Liberal Arts or Bachelor of Science Curriculum. Each semester.

COMMUNICATION

COMM. 100: EXPLORATIONS IN MASS COMMUNICATION 2 s.h.

A systematic study of the field of communication. Content includes historical perspectives, characteristics and functions of various media and communication fields, a study of career options, and competencies required of a professional in each area. Current issues, trends, and employment opportunities will be examined as they relate to career areas. Fall, annually.

COMM. 152: MESSAGE DESIGN 3 s.h.

Investigates the elements of effective communication, including the dimensions of sensory perception, meaning, environment, attitude, and technology. Students shall be required to apply theoretical concepts to practical problems. Each semester.

COMM. 171: WRITING FOR MEDIA 3 s.h.

Develops fundamental skills in writing and/or visualizing for a variety of media forms. Emphasis will be placed on print and broadcast newswriting, advertising copywriting and public relations writing. Prerequisite: Eng. 111 or consent of instructor. Each semester.

COMM. 200: NEWSWRITING 3 s.h.

Principles and practice of evaluating, gathering and writing the fundamental news story and news feature; preparation of copy for publication, interviewing, and laboratory experience. Fall, annually.

COMM. 240: LOCALLY PRODUCED MATERIALS 3 s.h.

Design and production of materials — handouts, charts, posters, bulletin boards, displays, and slide/tape programs. Skills in lettering, layout, design, color, simple photography, and audiotape recording with portable equipment will be learned. On demand.

- COMM. 250: JOURNALISM** 3 s.h.
- Provides an introduction to mass communication and the media. The current concept of journalism as a skill to achieve effective communication within the confines of numerous occupations is explored, and journalistic techniques are examined. The social responsibility of the press is probed as to the needs of society and society's need to know. Spring, annually.
- COMM. 251: INTRODUCTION TO IMAGES** 3 s.h.
- Develops an awareness of the perceptual cues in the environment with the goal of enabling the student to use this awareness in the design of graphics, films, electronic and sound images. An introduction to the production process. Camera required. See specifications under "College of Communication" section. Each semester.
- COMM. 271: REPRODUCTION GRAPHICS** 3 s.h.
- Develops basic skills in graphic arts processes, layout design, and preparation of copy for reproduction with emphasis on offset lithography. \$50 equipment deposit required. Camera required. See specifications under "College of Communication" section. Prerequisites: Comm. 152, 171, and 251. Each semester.
- COMM. 315: PHOTOGRAPHY** 3 s.h.
- Provides basic principles of photography and intermediate principles of photojournalism. Study of camera and darkroom techniques; the production of photographs for news, advertising, scientific, and instructional use. Camera required. See specifications under "College of Communication" section. On demand.
- COMM. 351: PRODUCTION APPLICATION** 5 s.h.
- Provides the student with training in television production and experience in the application of communication theory and production techniques. Integrates skills in writing, photography, audio and graphics in a total production context. Camera required. See specifications under "College of Communication" section. Prerequisite: Comm. 271. Each semester.
- COMM. 352: COMMUNICATION RESEARCH METHODS** 3 s.h.
- Develops entry level skills in use of the research process as applied to the study of human behavior. Emphasizes the role of research in the various communication professions. Requires the possession of a hand calculator with square root and preferably with Algebraic Operating System (AOS) logic. Prerequisite: Comm. 152. Each semester.
- COMM. 360: PUBLICATIONS EDITING** 3 s.h.
- This course provides fundamental instruction in editing skills; copy editing, headline writing, typography, photographs, copy control and layout. It also examines the role and responsibilities of the editor. Prerequisite: Comm. 271. On demand.
- COMM. 400: MEDIA ADVERTISING** 3 s.h.
- Provides the student with practical experience in decision-making and creative planning for both national and retail advertising. The course includes a review of basic concepts in advertising. On demand.
- COMM. 402: INTERNSHIP** 5 s.h.
- Provides experience during which the student applies theory and techniques to communication tasks of a cooperating business, industry, agency or institution. The student will be required to obtain approval of a detailed proposal before registering for the course. Prerequisites: Comm. 351, 352, senior standing, minimum 2.5 QPA, and endorsement of two

communication faculty members. Individual exceptions may be granted upon application to the faculty through the advisor. Arranged.

COMM. 411: FOUNDATIONS OF BROADCASTING 3 s.h.

An overview of the broadcasting industry, including history, technical aspects, station and network organization, sales, ratings, programming and social influences. A foundation course for radio-TV career preparation, related fields of communication, and the development of knowledgeable consumers of broadcast media. On demand.

COMM. 431: PUBLIC RELATIONS PRINCIPLES AND PRACTICE 3 s.h.

This course is designed to provide fundamental instruction in public relations practices, including program planning and evaluation, working with the media, writing for public relations and co-ordinating special events and functions. The structure and process of public relations in business, institutions and American society will be explored through readings and discussion. On demand.

COMM. 440: MEDIA PRODUCTION PLANNING 3 s.h.

Provides basic scriptwriting and production skills in audiotapes, slide/tape programs, and videotapes with portable equipment. Presentations for use with individual instruction, large and small group instruction, student group projects, and public relations situations in education, the community, business and industry. Prerequisite: Comm. 240 or permission of instructor. May not be taken for credit by Communication majors. On demand.

COMM. 451: COMMUNICATION EVALUATION 3 s.h.

Develops skills in the selection, development, and use of specific evaluation tools for various communication professions. Both qualitative and quantitative procedures are applied. Emphasis is placed on formative evaluation and the role of objectives. Prerequisite: Comm. 352. Each semester.

COMM. 452: COMMUNICATION LAW 3 s.h.

Introduces the student to various laws such as those of libel, privacy, copyright, access, and FTC and FCC rules and regulations governing the fields of communication. Ethical considerations in communication fields and potential restrictions, such as union and company policies, on communication are also discussed. Fall, annually.

COMM. 491: INDEPENDENT STUDY 1-3 s.h.

Allows the imaginative student to structure an independent research project in the area of communication with a minimum of faculty supervision. A proposal specifying objectives, methods, and evaluation techniques must be submitted to and approved by the student's advisor and dean.

COMM. 499: SPECIAL TOPICS IN COMMUNICATION 1-3 s.h.

Focuses on a single, broad contemporary topic of current interest in communication and related fields. Course content varies from semester to semester. Topics to be considered will be announced in advance. May be taken three times for credit. On demand.

COMPUTER INFORMATION SCIENCE

CIS 110: COMPUTER INFORMATION PROCESSING 3 s.h.

Basic introduction to data processing, computer operation, programming, and problem

CIS 240:	DISCRETE MATHEMATICAL STRUCTURES	3 s.h.
An introduction to the mathematical expertise necessary to facilitate the efficient computer manipulation of data. Topics include permutations and combinations, boolean logic, lattices, graphs, etc. Each semester.		
CIS 253:	BAL	3 s.h.
This course consists of two major parts. The first is an introduction to assembly language programming and the second concentrates on an introduction to computer organization and the structuring of major hardware components. It develops a basic understanding of the mechanics of information transfer and control and the fundamentals of logic design. Prerequisite: CIS 164 or 224. Each semester.		
CIS 254:	INFORMATION STRUCTURE	3 s.h.
An introduction to the representation of information in both primary and secondary storage. The major concepts of the course are reinforced through the use of programming assignments. Prerequisites: CIS 164 or 224. Each semester.		
CIS 255:	SURVEY OF LANGUAGES	3 s.h.
A survey of several of the more popular computer languages with emphasis on the types of problems for which each language was designed and how each language is adapted to the computer hardware of the major vendors. Prerequisite: CIS 164 or 224. Each semester.		
CIS 301:	BUSINESS COMPUTER SYSTEMS ANALYSIS	3 s.h.
This computer course studies informational needs and patterns of information flow within businesses. The primary emphasis is on the analysis and design of computer systems. Prerequisites: CIS 223, and at least one of CIS 211 or 224. Each semester.		
CIS 302:	EDP AUDITING AND SECURITY	3 s.h.
EDP Auditing and Security is concerned with the EDP audit process, provision and evaluation of controls in all aspects of EDP system operation, and the provision and maintenance of computer security. Internal control is stressed as specific controls and security are studied. Prerequisites: Actg. 252, CIS 224. Each semester.		
CIS 350:	MACHINE ARCHITECTURE AND SYSTEMS SOFTWARE	3 s.h.
This course investigates the basic concepts of machine architecture together with their realization and software implications in various categories of computer systems. Prerequisite: CIS 253. Annually.		
CIS 355:	OPERATING SYSTEMS I	3 s.h.
This course is a study of computer operating systems. Topics covered are the functions of operating systems, the design of operating systems at the register transfer and programming levels, and the important relationships between operating systems and computer hardware. Prerequisites: CIS 254 and 350. Spring semester.		
CIS 356:	DATA STRUCTURES AND ALGORITHM ANALYSIS	3 s.h.
This course promotes development of skills in the application of algorithmic methods to the solution of decision problems in the use of data structures. Prerequisites: CIS 253 and 254. Fall semester.		
CIS 357:	STRUCTURE OF PROGRAMMING LANGUAGES	3 s.h.
This course involves a study of the capabilities and limitations of programming languages		

based on the types of operations allowable and efficiency of such operations. Various languages are used to illustrate such differences and there is a substantial emphasis on programming style to achieve high efficiency. Various data types and structures are also covered. Prerequisites: CIS 253, 254, and 255. Annually.

CIS 402: DATA BASE MANAGEMENT SYSTEMS 3 s.h.

A study of commercially available Data Base Management Systems; "hands on" experience with a Data Base Management System; and participation in the analysis, design, implementation and maintenance of a Data Base Management System. Prerequisites: CIS 223 and 301. Annually.

CIS 403: DATA COMMUNICATIONS 3 s.h.

Data Communications cover fundamental communication concepts such as synchronous/asynchronous transmission, modulation and half and full duplex; hardware of data communications, techniques as multiplexing, multipoint line control and switching; error detection and correction, tariffs and costs; and designing a basic data communication network. Annually.

CIS 422: INTERNSHIP IN COMPUTERS

The internship provides the student with the opportunity for practical computer experience in business, government, or other participating organizations. Prerequisites: CIS 164 or 224. Junior or Senior standing. Each semester.

CIS 460: INTRODUCTION TO THEORY OF COMPUTATION 3 s.h.

An introduction to the theory underlying the design, use and limitations of computers. Includes finites state and infinite state machines, computability, formal systems. Prerequisites: CIS 164 or CIS 224, 240. Annually.

CIS 461: OPERATING SYSTEMS II 3 s.h.

Operating systems is a course devoted to the study of the computer programs that are used to control and monitor the overall functioning of the computer as it runs the various application or teaching/learning programs for which the computer was acquired. This is an advanced course in operating systems following Operating Systems I. Prerequisites: CIS 355 and Math. 455. An elective offered as student demand warrants.

CIS 462: SIMULATION AND MODELING 3 s.h.

This course covers the advantages and disadvantages of using computer simulation in modeling. Students will learn and practice techniques of computer simulation. Prerequisites: CIS 164 or 224 for Bus. Ad. majors and either Math 221 or 455, or consent of instructor. Spring semester.

CIS 469: SEMINAR IN COMPUTER & INFORMATION SCIENCE 1 s.h.

A brief look at diverse subjects in computing and information systems. Each student will research an approved topic and offer a related verbal presentation to the class. Prerequisite: senior standing. Spring, annually.

CIS 499: INDEPENDENT STUDY IN COMPUTERS

This course permits students to explore an area of special interest using computers. The special project must be under the direction of a department faculty member. Prerequisites: CIS 164 or 224. Junior or Senior standing.

EDUCATION

ED. 110: INTRODUCTION TO EDUCATION 3 s.h.

This introductory course will familiarize students with the public school system. Topics covered include: philosophical, sociological and historical backgrounds of education, organization and governance of schools, the role of the teacher and choosing teaching as a career. Planned visits to elementary and secondary schools are required. Each semester.

ED. 221: DEVELOPMENTAL READING 3 s.h

A broadly based course which emphasizes improvement in rate, comprehension, reading taste, and independence in reading. Students are introduced to wide and varied sources of reading and numerous means of improvement in reading skills. Instruction in theory and an introduction to the possibilities of a supplementary mechanical program for reading improvement are included. Not recommended for students who have taken GS 100: College Reading/ Study Skills. Fall semester.

ED. 224: EDUCATIONAL EVALUATION 3 s.h.

This course addresses the construction, selection, administration, interpretation, and utilization of evaluation instruments and techniques. Students will be required to analyze standardized tests applicable to their certification area, as well as construct and utilize informal instruments. Participation experiences in the schools are required. Each semester.

ED. 225: MULTICULTURAL EDUCATION 1 s.h.

The purpose of this course is to assist the student in developing an awareness and understanding of our multicultural-pluralistic society and in acquiring interpersonal and pedagogical skills needed to provide optimum learning opportunities for students. Each semester.

ED. 226: BASIC TEACHING SKILLS 1 s.h.

This course will provide the prospective teacher, through a clinical approach to teaching with the basic skills of planning, organizing, implementing and evaluating the teaching-learning process. The course will emphasize the body of research findings that focus specifically on the pedagogical skills necessary for quality teaching utilization of micro-teaching approaches, and simulations will be an integral component of this course. Participation experiences in the schools are required. Each semester.

ED. 227: CLASSROOM MANAGEMENT 3 s.h.

This course prepares pre-service professional educators to organize and manage instructional environments through a variety of instructional formats, classroom organizational methods, as well as teacher leadership roles. The course will provide the competencies necessary to plan positive instructional activities, organize classroom space and time, direct the acquisition of knowledge and appropriate social behavior, and apply a range of classroom control techniques. Participation experiences in the schools is required. Each semester.

ED. 324: METHODS OF TEACHING AND
EVALUATING MATHEMATICS 3 s.h.

Place and function of mathematics in secondary education; content improvement and evaluation of instruction in mathematics; acquaintance with current literature and research; observation in secondary schools. Prerequisite: 9 hours of college mathematics. Each semester.

ED. 326: METHODS OF TEACHING AND EVALUATING SOCIAL STUDIES

3 s.h.

This course is geared to coordinate knowledge of the social sciences with various strategies of teaching in a social studies program in the secondary schools. Emphasis is placed on the inquiry method. Students are expected to develop competencies in formulating objectives, in questioning, in planning lessons, in evaluation of materials, programs, and student performance and in designing learning activity packets. Students are afforded the opportunity to observe and to engage in clinical teaching experiences. Open to juniors and seniors. Fall.

ED. 328: METHODS OF TEACHING AND EVALUATING COMMUNICATION ARTS

3 s.h.

The course is designed to prepare the aspiring secondary school teacher in the methods of teaching such language based subjects as speech, composition, literature, grammar, and reading, and in such language-related, communication oriented activities as dramatics, journalism, yearbook production, and media use. Each semester.

ED. 331: METHODS OF TEACHING AND EVALUATING FOREIGN LANGUAGES (APPLIED LINGUISTICS)

3 s.h.

Lectures, discussion, and extensive reading on language learning and language teaching, with an introduction to applied linguistics. Required of all foreign language education majors except those taking ED. 322 or 327. Spring, annually.

ED. 332: BIOMETHODS

3 s.h.

A course designed to prepare biology teachers for the secondary schools. Emphasis is on formulating objectives, selecting and organizing content, developing skill in using a variety of teaching strategies, and evaluating pupil progress. The investigatory approach to teaching biology is stressed in laboratory, field, and simulated teaching experiences. Observations and teaching experiences in area schools are included. Fall, annually.

ED. 333: TEACHING READING IN THE SECONDARY CONTENT AREAS

3 s.h.

An examination of the techniques for helping secondary students develop the reading skills needed to comprehend content-area textbooks. Students will examine those skills essential to their certification area. A required course for secondary education majors. Participation experiences in the schools are required. Fall, annually.

ED. 334: METHODS OF TEACHING THE PHYSICAL SCIENCES

3 s.h.

Modern concepts of chemistry, physics, and general science teaching and evaluating with emphasis on a laboratory oriented approach. The philosophy, laboratory techniques, curriculum testing, and extra-curricular aspects of secondary school chemistry, physics, and general science teaching will be presented. Prerequisite: For secondary chemistry majors — 16 s.h. in chemistry; for comprehensive science majors — 16 s.h. of biology, chemistry, physics and/or applicable geography courses; for physics majors — 10 hours physics. Fall, annually.

ED. 335: METHODS OF TEACHING AND EVALUATING PHYSICS AND MATHEMATICS

3 s.h.

This course is designed for those students desiring to become certified in both Physics and Mathematics. It contains the modern methods of teaching and evaluating in both these disciplines, as described in the course listed as Education 324 and 334, in that the student will divide his time between these two methods courses according to a schedule presented in consultation with the instructors in these courses. Fall, annually.

ED. 401: METHODS OF ENVIRONMENTAL (OUTDOOR AND CONSERVATION) EDUCATION 3 s.h.

Philosophy, history, development, theory, and methods of outdoor, conservation, and environmental education. Skills in developing material and activities. Relation of the out-of-doors to school curricula. Prerequisites: Education major, upper division standing. Each spring, and summer on demand.

ED. 403:	FIELD EXPERIENCE IN MODERN CONCEPTS OF OUTDOOR EDUCATION	3 s.h.
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(McKeever Center in Sandy Lake, Pa. will be utilized for presentation of this course)

This course focuses on the application of current educational concepts, i.e., learning stations, team teaching, creative writing, dramatic role playing, and other creative activities to outdoor education. The relationship of all curriculum areas to outdoor education is examined and practiced. The course may be taken for graduate credit with the approval of the Education Department Chairman and the instructor. Offered for two weeks at a time between the end of the spring semester and the beginning of regular summer school only.

ED. 422: PROFESSIONAL PRACTICUM INCLUDING SCHOOL LAW 2 s.h.

Special attention to the practical application of techniques of teaching and classroom management, comparison of techniques in specialized areas, typical problems encountered in student teaching, general principles of school law, and Pennsylvania school laws pertaining to the work of the classroom teacher. Limited to student teachers except by special arrangement. Each semester.

ED. 423, 424: LIBRARY PRACTICE AND SECONDARY STUDENT TEACHING (6.6) — 12 s.h.

Two major assignments are required: The equivalent of one-half time in public school library practice and the equivalent of one-half time in classroom academic teaching, both under the supervision of approved cooperating librarians and teachers in public school student teaching centers affiliated with the College. Each semester.

ED. 424: SECONDARY STUDENT TEACHING 12 s.h.

Observation and participation in teaching and in activities related to the performance of a teacher's work in the area of the student's specialization. Assignments for secondary student teaching are completed at off-campus public school teaching centers associated with the College. Each semester.

ED. 427:	EXCEPTIONALITIES IN THE REGULAR CLASSROOM: IDENTIFICATION AND SERVICES	3 s.h.
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This course is designed to prepare students to deal with the nature and needs of the exceptional person in a regular classroom. Contemporary methods of identification, services for the exceptional individual and legal aspects of the least restrictive environment are examined. Each semester.

ED. 432: STUDENT TEACHING IN MUSIC 10 s.h.

Observing and teaching, under supervision, in vocal and instrumental music in the elementary, junior and senior high school. Each semester.

ED. 450: INDEPENDENT STUDY 1-3 s.h.

This course is designed to provide students with opportunity to explore an area of special need or interest in Education in depth under the supervision of a member of the department.

Students must develop a proposed study plan and secure the approval of the proposed director and department chairperson prior to registration. Prerequisite: Junior or Senior standing.

ED. 452/552: **READING PROBLEMS WORKSHOP** 3 s.h.

Within a format that includes the identification of problems and their possible causes, the selection of solutions, and procedures for the evaluation of results, participants will examine reading issues relevant to their current or anticipated professional roles. Emphasis will be on problems which affect groups of students rather than individuals. Consultation with school districts represented will be sought. Graduate students will be required to complete one additional assignment. Prerequisite: One course in reading or one year of teaching experience. Every other year.

ED. 499/599: **SPECIAL TOPICS IN EDUCATION** 1-3 s.h.

Examines current topics and issues in education. Topics, which will be announced in advance, will focus on the needs and interests of in-service educators.

ELEMENTARY EDUCATION

EARLY CHILDHOOD EDUCATION

E. CH. 231: **CREATIVE ACTIVITIES** 3 s.h.

Exploration of the nature and value of creativeness together with classroom opportunities for its development. Consideration of the unit of work and the guidance of children in creative learning and expression. Student participation in individual and group projects by which they demonstrate how creativeness can be fostered in the elementary school. Each semester, summer.

E. CH. 321: **CHILD DEVELOPMENT** 3 s.h.

Acquisition of understanding and appreciation of the mental, physical, social, and emotional aspects of development. Emphasis on techniques of motivation, principles of learning, the role of individual differences, and environmental factors affecting attitudes, personalities, growth, and intellectual interests. Lectures, discussions, readings, and reports required. Each semester, summer.

E. CH. 332: **NURSERY — KINDERGARTEN EDUCATION** 3 s.h.

Study of the function of pre-school and kindergarten programs in relation to the growth and development of children with a consideration of developmental and environmental influences on emotional problems. Study of the curriculum, physical environment, and such areas as music, literature, arts, science, creative expression, home-school relations, and dramatic play. Campus school experiences, direct reading, and films. Prerequisite: E. CH. 321 or permission of instructor. Each semester.

E. CH. 333: **DEVELOPMENTAL PROGRAMMING FOR INFANTS AND TODDLERS** 3 s.h.

This course examines the content of child development from birth through age three. Focus is placed on the normal processes of language, cognitive, social/affective, motor development, and on strategies for stimulating development in these areas. Instructional methods include lectures, films, examination of model programs, case studies, simulation exercises, group and individual projects. Prerequisite: E. CH. 321. Fall, annually.

E. CH. 335: SEMINAR IN EARLY CHILDHOOD EDUCATION 3 s.h.

The first credit of this course concerns the following topics in early childhood education: the special needs of preschooler, developmental assessment of preschoolers, and working with parents. Students enrolled for more than one credit will do field study to strengthen early childhood competencies, based on individual need, and present findings to a seminar group. Prerequisite: Junior standing and E. CH 332. May be repeated for 1-3 credits. Each semester.

E. CH. 401: CREATIVE RESPONSE TO CONFLICT: SOCIALIZATION AND DEVELOPMENTAL VIEWPOINTS 3 s.h.

The course is designed to support the participants in understanding theory and in planning techniques of conflict resolution. The course examines and practices cooperation (community building), communication effectiveness, and affirmation (self-concept) as primary components for actual creative responses to personal and group conflicts. Human capabilities for resolving conflicts at various life stages and in various situations are examined and practiced. Spring, annually.

E. CH. 420: INCIDENTAL LEARNING 3 s.h.

The course examines incidental learning gained by young children through their interactions with the people and products of their society's major institutions. It asks such questions as these: how do children interact with these institutions; what "rules of the game," ways of thinking, feeling, and valuing do children learn as incidental by-products of these interactions; how can teachers, for example, plan encounters (with people, materials, and environments) so that the encounters contribute to children's learning goals rather than subvert them. Fall, annually.

ELEMENTARY EDUCATION

EL. ED. 323: TEACHING OF READING 3 s.h.

An overview of the physiological and psychological aspects of reading and the materials and methods applicable for group and individual instruction in the elementary grades. Each semester, summer.

EL. ED. 324: TEACHING OF ELEMENTARY SCHOOL MATHEMATICS 3 s.h.

This course examines topics from both the "traditional" and "modern" elementary school mathematics instructional program. Emphasis is placed upon the scope and development of the subject matter of some of the more recent programs and upon the recent psychological contributions in the area of the conceptual stages, styles, and tempos related to teaching elementary school mathematics. The development and implementation of a repertoire of mathematics teaching strategies, instructional media, and diagnostic procedures are stressed throughout the course. Prerequisite: Math 111. Each semester, summer.

EL. ED. 325: TEACHING ELEMENTARY SCHOOL SOCIAL STUDIES 3 s.h.

A course coordinating theory and practice in the teaching of elementary school social studies. An historical perspective and examination of current national curriculum programs is developed along with methods and materials applicable to unit type teaching in the social studies. Emphasis is placed on selection organization and evaluation of materials and experiences that foster the inquiry approach in social studies. Each semester.

EL. ED. 326: READING PROBLEMS IN THE ELEMENTARY SCHOOL 3 s.h.

Provides theory and practicum for the remedy of reading and learning problems in the classroom, and the diagnostic tools and methods with which to discover and correct the aca-

ademic, emotional, and physical factors involved in children with specific and non-specific learning disorders in the field of reading. Prerequisite: EL. Ed. 323. Each semester, summer.

EL. ED. 330: COMMUNICATION ARTS IN THE ELEMENTARY SCHOOL 2 s.h.

Pre-service teachers are required to develop teaching strategies in the communication arts at the elementary school level. In a series of learning modules set in a workshop atmosphere, students prepare techniques and methods of instruction to be integrated into the process of communication for children. Each semester.

EL. ED. 331: CHILDREN'S LITERATURE 3 s.h.

The course directs students in the study of the historical growth and development of children's books. Pre-teaching students are required to develop teaching strategies to introduce literature to children, to extend children's language experiences, and to develop children's aesthetic appreciation for literature and art in a program which integrates literary activities across the curriculum. Each semester.

EL. ED. 422: PROFESSIONAL PRACTICUM INCLUDING SCHOOL LAW 2 s.h.

Problems, practices, and regulations attending student teaching professional experiences. Coordination of the student teaching program with the educational objectives of the student teaching centers. Pennsylvania school laws relevant to the work of the beginning elementary school teachers. Practical interpretations of professional ethics and the functions of professional organizations. Limited to student teachers. Each semester.

EL. ED. 424: ELEMENTARY STUDENT TEACHING 12 s.h.

Observation and participation in teaching and in activities related to the performance of a teacher's work. The semester's program is divided into two student teaching assignments involving experience at two grade levels. Most assignments for elementary student teaching are completed at public school off-campus student teaching centers associated with the University. Each semester.

EL. ED. 423 424: LIBRARY PRACTICE AND ELEMENTARY STUDENT TEACHING (6,6) — 12 s.h.

Observation and participation in teaching and in activities related to the performance of a teacher's work. The semester's program is divided into two teaching assignments involving experience at one grade level and an elementary school library. Most assignments for elementary student teaching are completed at public school off-campus student teaching centers associated with the University. Each semester.

ENGLISH

ENG. 110: BASIC COMPOSITION SKILLS 3 s.h.

This course is designed to provide instruction in the fundamentals of writing. Students are preassigned to English 110. All students who take English 110 must also take English 111: English Composition. Each semester.

ENG. 111: ENGLISH COMPOSITION 3 s.h.

This course emphasizes the development of practical skills in expository writing through writing experiences and the study and analysis of prose models. When necessary, work is done in punctuation, basic grammar, and spelling. This course is a college-wide requirement; however, it may under some circumstances be exempted. Each semester.

ENG. 170: THE LITERARY EXPERIENCE 3 s.h.

This introductory course provides a wide selection of literature to acquaint the student with various literary genres. No prerequisite. Recommended for all students. Each semester.

ENG. 172: INTRODUCTION TO FILM AS LITERATURE 3 s.h.

This course is designed to explore narrative in literature and film to demonstrate the relationships between the two media, and should enhance the student's ability to interpret and respond to narrative encountered in visual or printed form. No prerequisites. Each semester.

ENG. 200: COMPOSITION AND LITERATURE 3 s.h.

This course stresses the writing of papers as a direct result of reading, discussion and interpretation of a variety of literary types. The short story, the drama, and the poem are examined from several points of view. Research techniques and related skills are utilized as needed. Prerequisite: exemption from or completion of the General Education English requirement. Each semester.

ENG. 201: ADVANCED COMPOSITION 3 s.h.

Advanced composition emphasizes writing experience in critical, expository, descriptive, argumentative, and creative work through intensive study of examples, frequent papers, and critical discussion of students' work. Prerequisite: exemption from or completion of the General Education English requirement. Each semester.

ENG. 202: BEGINNING CREATIVE WRITING 3 s.h.

This course introduces students to the techniques of creative writing in prose and poetry. Major emphasis is on writing practice for students and opportunities for guidance and critical examination of their work. Prerequisite: Completion of General Education English requirement. Fall, annually.

ENG. 203: THE CRAFT OF FICTION 3 s.h.

The course provides extensive practice in the writing of short narrative fiction. Student work is subjected to intensive group criticism. Course standards roughly approximate those of commercial fiction editors. Prerequisite: Eng. 201 or 202 or permission of instructor based on examination of writing samples. Spring, even-numbered years.

ENG. 204: THE CRAFT OF POETRY 3 s.h.

This course is designed to provide the advanced writer intensive practice in the writing of poetry. A significant portfolio of high-quality poetry is expected of each participant by the end of the course. Prerequisite: Eng. 201 or 202 or permission of instructor based on examination of writing samples. Spring, odd-numbered years.

ENG. 206: BUSINESS WRITING 3 s.h.

This course is designed to meet the specific needs of those students whose skills in written communications are oriented toward the world of business. Prerequisite: satisfactory completion of or exemption from the General Education English requirement. Each semester.

ENG. 209: SPECIAL TOPICS IN LITERATURE 3 s.h.

This course will focus on themes and topics of universal and/or current interest as embodied in literature. The special subject of each semester's offerings will be announced in pre-registration. It is suitable for both English and non-English majors and may be taken up to three times for credit, provided that different topics are offered. On demand.

ENG. 210: THE MODES OF LITERATURE 3 s.h.

This introductory course in literature is a study of different genres from the perspective of a particular view of life reflected by literary modes (comic, tragic, heroic, satiric). Suitable for both English and non-English majors and may be taken up to three times for credit, provided that different topics are offered. On demand.

ENG. 221: ENGLISH LITERATURE: THE BEGINNINGS TO 1800 3 s.h.

First part of a survey study beginning with the Boewulf poem and extending through the works of such figures as Chaucer, Spenser, Shakespeare, Milton, Pope, and Swift. Fall, annually.

ENG. 222: ENGLISH LITERATURE: 1800 TO THE PRESENT 3 s.h.

Second part of survey study including the works of such major writers as Wordsworth, Coleridge, Byron, Shelley, Keats, Tennyson, Browning, Hardy, Yeats and Eliot. Spring, annually.

ENG. 230: CONTEMPORARY BLACK AMERICAN LITERATURE — 1910 TO THE PRESENT 3 s.h.

This course is designed to give insight into the Black experience through the reading and discussion of the works of Black writers who have made significant contributions to literature. Fall, annually.

ENG. 250: STUDIES IN WESTERN MYTHOLOGY 3 s.h.

This course will concentrate upon Greco-Roman and British (Arthurian) legends in order to demonstrate the systematic nature and recurrent patterns of mythology. It is designed not only to give the student a thorough knowledge of content but to clarify questions of form. Spring, annually.

ENG. 252: INTRODUCTION TO THE ENGLISH LANGUAGE 3 s.h.

This introductory course in language deals generally with the nature of language and specifically with the structures of modern English, its regional and social varieties, and certain highlights of its historical development. Each semester.

ENG. 253: ENGLISH GRAMMAR AND USAGE 3 s.h.

This course is devoted to an intensive study of English grammar and problems in usage. Each semester.

ENG. 270: TRAINING FOR WRITING CENTER TUTORS 1 s.h.

In four meetings of three hours each, tutors are instructed in methods of explaining to students the nature of writing problems and corrective measures to be taken. Tutors are trained in critical analysis and evaluation of student writing, recognizing individual errors in grammar and punctuation, and learning effective methods of explaining grammatical and rhetorical principles. Emphasis is on holistic evaluation. Attention is directed to appropriate attitudes and behaviors in peer-tutor/student relationships. Prerequisites: Tutors are accepted by invitation only on the basis of performance in writing courses; grade point average must equal or exceed 3.0. Fall, annually.

ENG. 303: SIXTEENTH CENTURY PROSE AND POETRY 3 s.h.

Examination of the non-dramatic literature of the sixteenth century focusing upon Sidney, Spenser, and Shakespeare. Fall, odd-numbered years.

ENG. 305: STUDIES IN SEVENTEENTH CENTURY
ENGLISH LITERATURE 3 s.h.

Literary exploration of works by figures as Bacon, Browne, Jonson, Donne, Herbert, Marvell, and Milton. On demand.

ENG. 307: STUDIES IN EIGHTEENTH CENTURY
ENGLISH LITERATURE 3 s.h.

Critical examination of the works of such representative writers as Dryden, Pope, Swift, Boswell, Johnson, and Goldsmith. Spring, even-numbered years.

ENG. 311: STUDIES IN NINETEENTH CENTURY
ENGLISH LITERATURE 3 s.h.

Intensive examination of works by such representative writers as Carlyle, Newman, Tennyson, Browning, Arnold, and Morris. Spring, odd-numbered years.

ENG. 320: STUDIES IN 19TH CENTURY AMERICAN FICTION 3 s.h.

Analysis and discussion of works by such representative writers as Poe, Hawthorne, Melville, Howells, Crane, and Norris. Fall, annually.

ENG. 322: STUDIES IN 20TH CENTURY AMERICAN FICTION 3 s.h.

Critical reading and discussion of works by such figures as Dreiser, Hemingway, Faulkner, Mailer, Bellow, and Barth. Spring, annually.

ENG. 332: NINETEENTH CENTURY BRITISH NOVEL 3 s.h.

This course offers an opportunity to explore the English novel from Austen to Hardy. Nine or ten novels are studied with selections from Austen, Scott, Eliot, Dickens, Thackeray, Disraeli, Meredith, Trollope, the Brontes, Gaskell. No prerequisite; however, one semester of English literature survey (Eng. 221 or 222) is recommended. Fall, annually.

ENG. 333: TWENTIETH CENTURY BRITISH NOVEL 3 s.h.

This course is an in-depth study of the modern British novel from its beginnings in the late nineteenth century to the present. Nine or ten novels are intensely examined, with selections from such authors as: Hardy, Conrad, Wilde, Lawrence, Joyce, Forester, V. Woolf, A. Huxley, Orwell, Green. No prerequisite; however, one semester of English literature survey (Eng. 221 or 222) recommended. Spring, annually.

ENG. 339: SHORT FICTION OF THE TWENTIETH CENTURY 3 s.h.

This course concentrates on the developments in the short story of the twentieth century. Readings are drawn from such modern writers of wide reputation as Kafka, Joyce, Faulkner, Camus, and Lagerkvist. Fall, annually.

ENG. 341: TWENTIETH CENTURY POETRY 3 s.h.

Explication and discussion of works by such writers as Yeats, Frost, Eliot, Auden, Roethke and Lowell. Fall, odd-numbered years.

ENG. 343: MODERN DRAMA 3 s.h.

A comprehensive view of the best dramatic literature of the modern American and British theater since 1890 is presented through lectures, discussion, and experiences related to the contemporary stage. Spring, even-numbered years.

ENG. 345: ENGLISH DRAMA 3 s.h.

Critical analysis of selected works by dramatists in a particular age; e.g., the Restoration Period. Spring, annually.

ENG 355: TOPICS IN LITERARY THEORY 3 s.h.

The course is a historical study of literary criticism and aesthetic theory with emphasis upon modern trends. On demand.

ENG. 365: IMAGES OF WOMEN IN LITERATURE 3 s.h.

The course examines several stereotypes of women reflected in myth and literature and formed by the historical, sociological and psychological forces which shape our perceptions of the self and of the other. The study of these images will be informed by the study of the craft of literature, how things such as imagery and point of view enable the writer to successfully convey his/her idea, story. Spring, annually.

ENG. 372: NARRATIVE GENRES IN FILM 3 s.h.

This course explores genre as sets of narrative conventions that have vitalized mainstream American film. Genre is demonstrated to be a socializing force as well as a mirror of social change. Two or three genres are highlighted each time the course is offered. With additional requirements also listed for graduate credit as Eng. 572. On demand.

ENG. 385: AMERICAN POETRY TO 1900 3 s.h.

This course is a survey of major American poets from Anne Bradstreet and Edward Taylor to Emily Dickinson. Spring, odd-numbered years.

ENG. 401: CHAUCER 3 s.h.

A study in Middle English of Chaucer's early poems, *Troilus and Criseyde*, and the *Canterbury Tales*. Fall, even-numbered years.

ENG. 412: SHAKESPEARE: COMEDIES AND HISTORIES 3 s.h.

Study and discussion of problems of style, characterization, and motivation in Shakespeare's experimental and maturing comedies, chronicle and Roman plays, and tragedies. Plays to be selected from the first two periods of Shakespeare's creative production. Fall, annually.

ENG. 413: SHAKESPEARE: TRAGEDIES AND ROMANCES 3 s.h.

Study and discussion of problems of style, characterization, and motivation in Shakespeare's mature comedies. Roman plays, tragedies, and romances. Plays to be selected from the last two periods of Shakespeare's creative production. Spring, annually.

ENG. 441: WRITERS IN REVOLT: ENGLISH ROMANTICISM 3 s.h.

The major works of Wordsworth, Coleridge, Byron, Shelley, Keats and their contemporaries are considered and related to the intellectual, political, and social currents of the time. Spring, even-numbered years.

ENG. 456: ENGLISH HONORS SEMINAR 3 s.h.

Devoted to intensive study of selected writers and their works, the seminar is designed to offer excellent students opportunities for advanced and unusually challenging study in literature. Admission by departmental invitation. On demand.

ENG. 457: INTRODUCTION TO LINGUISTICS 3 s.h.

This course presents basic theories and analytical procedures used in contemporary linguistics systems. An introduction to psycholinguistics is provided in conjunction with extensive studies in transformational grammar. Fall, annually.

ENG. 458/558: HISTORY OF THE ENGLISH LANGUAGE 3 s.h.

This history of the English language: a study of its origins and changes in structure, usage, pronunciation, spelling, vocabulary, and meaning. Intensive readings in Old and Middle English. With additional requirements, also listed for graduate credit as Eng. 558. Spring, odd-numbered years.

ENG. 460: INDEPENDENT STUDY 1-6 s.h.

This course permits students to explore an area of special interest in the English language or its literature. Students must develop a plan of study, secure the approval of a member of the English faculty willing to supervise the project, and submit the plan to the department chairperson. Maximum credits — 6. Prerequisite: junior or senior standing.

ENG. 461: WRITERS' WORKSHOP 3-6 s.h.

The Clarion Writers' Workshop provides an opportunity for students of writing to work with professionals in the congenial give-and-take atmosphere of the workshop situation. Visiting writers and/or coaches of writing may be in residence to work with students who wish writing experience in a variety of modes. Summers only.

ENVIRONMENTAL STUDIES

ENVIR. ST. 401: ENVIRONMENTAL PROBLEMS IN SOCIETY 3 s.h.

Interdisciplinary study of how the human species and their social institutions interact with the physical and biological systems of the environment. Fall, annually.

ENVIR. ST. 475: FIELD NATURAL HISTORY 3 s.h.

Competencies in biology, meteorology, geology, and astronomy are explored. Emphasis is placed on developing competencies which will be valuable in teaching Environmental (Outdoor and Conservation) Education. For non-science majors. Prerequisites: Upper division standing. Spring, annually.

NOTE: For additional courses related to Environmental Education certification endorsement, see Art 373, Ed. 401, and El. Ed. and Ed. 403.

FRENCH

In addition to courses listed below, students of French have an opportunity to study for a summer, a term, or an entire academic year in France and/or Canada. An opportunity to participate in a program of international business internships in Paris is made available to qualified students.

FR. 101: SPECIAL TOPICS: THE EUROPEAN MIND 3 s.h.

Historical and contemporary developments on the European intellectual scene will be covered by experts on individual countries with regard to their relevance for the present American student generation.

The special subject of each semester offering will be announced in pre-registration. Open to all students of the university without prerequisites and may be taken up to three times for credit provided that different topics are offered. Course is taught in the English language. Two-year cycle.

FR. 109: FRENCH LITERATURE IN TRANSLATION 3 s.h.

A study of representative French literary works, with particular emphasis on the characters and ideas which have influenced both French and other literatures. The course is conducted in English; no knowledge of French required; no prerequisites. Two-year cycle.

FR. 151: FRENCH I (ELEMENTARY) 3 s.h.

Essentials of grammar with emphasis on aural comprehension and oral expression. Each semester.

FR. 152: FRENCH II (ELEMENTARY II) 3 s.h.

Continuation of French 151, with increasing emphasis on graded reading material. Prerequisite: French 151 or equivalent. Each semester.

FR. 153: ELEMENTARY FRENCH CONVERSATION 3 s.h.

Conversational practice, with extensive oral drill on grammatical patterns. Designed for those students who have met the prerequisites for French 251 but are lacking in aural-oral proficiency. May be taken concurrently with French 251. Spring, annually.

FR. 251: FRENCH III (INTERMEDIATE I) 3 s.h.

Systematic review of basic grammar; graded readings, conversation, translation, and composition on selected topics. Prerequisite: French 152 or two years of high school study and/or a satisfactory placement test score. Fall, annually.

FR. 252: FRENCH IV (INTERMEDIATE II) 3 s.h.

Intensive reading of selected works; outside reading, with oral and/written reports. Prerequisite: French 251 or a satisfactory placement test score. Spring, annually.

FR. 253: COMMERCIAL FRENCH 3 s.h.

A study of commercial terminology and style, with extensive writing of business letters of various kinds. Prerequisite: Fr. 152 or equivalent. Two-year cycle.

FR. 255: FRENCH CIVILIZATION I 3 s.h.

A survey of French geography, history, literature, and culture designed to equip students with the materials and understanding necessary to the presentation of the language as a rich, meaningful, and integral part of a great civilization. Prerequisite: French 252 or four years of high school study and/or satisfactory placement test score. Required of French majors. Three-year cycle.

FR. 256: FRENCH CIVILIZATION II 3 s.h.

Continuation of French 255, which is prerequisite. Required of French majors. Three-year cycle.

FR. 260: THE FRENCH SHORT STORY 3 s.h.

A study of representative short stories of the nineteenth and twentieth centuries. All readings and discussions in French. Three-year cycle.

- FR. 351: **ADVANCED FRENCH GRAMMAR AND COMPOSITION** 3 s.h.
- Intensive oral and written drill with emphasis on finer points of grammar, colloquial, and idiomatic usage. English-to-French translation, free composition, and conversation on everyday topics. Prerequisites: French 255 and 256 or one literature course. Three-year cycle.
- FR. 353: **THE MODERN FRENCH DRAMA** 3 s.h.
- French drama from the 1890's to the present day. Playwrights principally treated are Maeterlinck, Claudel, Cocteau, Giraudoux, Anouilh, Sartre, Camus, Beckett, and Ionesco. Four-year cycle.
- FR. 354: **THE MODERN FRENCH NOVEL** 3 s.h.
- A study of seven major French novelists of the 20th Century; Proust, Gide, Malraux, Mauriac, Sartre, Camus and Bernanos. Four-year cycle.
- FR. 355: **FRENCH ROMANTICISM** 3 s.h.
- A study of French Romanticism from Chateaubriand to the Revolution of 1848. Major figures: Chateaubriand, Stendhal, Balzac, and Hugo. Four-year cycle.
- FR. 356: **FRENCH POETRY FROM BAUDELAIRE TO SURREALISM** 3 s.h.
- A survey of the major trends of French poetry from Baudelaire to the early 20th Century, particularly Baudelaire, Rimbaud, Verlaine, Mallarme and Valery. Four-year cycle.
- FR. 358: **THE LITERATURE OF THE AGE OF ENLIGHTENMENT** 3 s.h.
- Readings of essays, drama, and fiction of the 18th Century. Major figures: Montesquieu, Voltaire, Diderot, and Rousseau. Four-year cycle.
- FR. 359: **THE LITERATURE OF THE CLASSICAL AGE** 3 s.h.
- Classical French philosophy, drama, and poetry; Corneille, Racine, Moliere, Pascal, Descartes, La Fontaine. Offered when faculty available.
- FR. 360: **FRENCH CANADIAN WRITERS** 3 s.h.
- A study of the major trends in French Canadian theater, prose and poetry with concentration on Gelinas, Anne Hebert, Theriault, Gabrielle Roy, Nelligan, and Grandbois. Four-year cycle.
- FR. 361: **BLACK WRITERS IN FRENCH LITERATURE** 3 s.h.
- A study of the major trends in African literature written in French. The course will emphasize the works of Jacques Roumain, Sembene Ousmane, Amadou Kourouma, Francis Bebey, Loupold Senghor, Aime Cesaire, Bernard Dadie. Four-year cycle.
- FR. 451: **SUPERVISED READINGS IN FRENCH LITERATURE** 3 s.h.
- As the title suggests, the course is devoted to selected readings determined in relation to the needs and interests of the individual major. On demand.

GENERAL STUDIES

Courses carrying the G.S. label are interdisciplinary in nature or are courses which do not fit into any of the usual academic disciplines. They are taken as free electives, as Personal Development and Life Skills under general education, or may with departmental approval be substituted for required courses in some majors.

G.S. 100: COLLEGE READING/STUDY SKILLS 2 s.h.

This course develops the reading/study skills required at the college level. Students will be helped to organize study plans according to the purpose of the assignment and the nature of the materials. Emphasis will be placed on applying these skills to courses students are currently studying. No prerequisites. Each semester.

G.S. 109: FOREIGN LITERATURE IN TRANSLATION 3 s.h.

Offered by the Department of Foreign Languages and Cultures, listed as Fr. 109, Ger. 109, Russ. 109, or Span. 109.

G.S. 110: THE STUDENT IN THE UNIVERSITY 3 s.h.

This course is designed to (1) enable the freshman student to explore and understand himself/herself as a developing adult interacting in a higher educational environment; (2) identify and/or utilize campus and community resources that will enhance his/her academic program; (3) develop strategies to facilitate the learning process; and (4) apply those strategies in a practical manner in order to build upon a resource base for academic skill transference. Note: This course is designed for freshman students only and will be a general elective under Personal Development and Life Skills. Each semester.

G.S. 123: INTRODUCTION TO LOCATING AND ORGANIZING INFORMATION 3 s.h.

Study of information sources and information organization: methods for surviving the information explosion. Recommended as an elective for non-library science students. Not creditable toward library science specialization. G.S. 123 earns credit toward graduation only when taken by freshmen and sophomores. Juniors and seniors will receive credit, but such credit will not count toward graduation. On demand.

G.S. 220: HUMAN SEXUALITY 3 s.h.

A basic course in self-understanding. The student is given the opportunity to be informed on (a) the physical, psychological, ethical, social, and legal components of sexuality as they relate to attitudes toward self and others; (b) the roles involved in being male and female; (c) relationships as they are affected by attitudes; and (d) the responsibilities of such relationships. Each semester.

G.S. 222: CREATIVE PROBLEM SOLVING 3 s.h.

An investigation of the elements of solving a variety of problems, beginning with closed problems such as puzzles or cryptograms, and progressing through simple games and complex games to the complexities of open ended problems of personal and political life. Emphasis will be on development of proficiency in dealing with new situations and techniques through actual practice. No prerequisites. Each semester.

G.S. 225: HUMAN GENETICS AND SOCIETAL PROBLEMS 3 s.h.

Technological and medical advances pose serious threats to the quality of man's genetic future. The relationship between major advances in genetic knowledge and their significance, both immediate and potential, will be presented and discussed. The medical and social benefits and risks of large scale genetic screening, genetic counseling and prenatal diagnosis with abortion will be thoroughly explored. The theoretical and practical possibilities of genetic engineering will be considered in the light of contemporary human values. A paper on some aspects of societal problems on human genetics will be required. This course will not meet the genetics requirements for a biology major. Prerequisite: Basic Biology or permission of the instructor. Alternate years on demand.

G.S. 230: SPECIAL TOPICS — THE EUROPEAN MIND 3 s.h.

Offered by the Department of Modern Languages and Cultures, listed as Fr. 101, Ger. 101, Russ. 101, Span. 101. See course description under appropriate language listings.

G.S. 240: CONSUMER ECONOMICS 3 s.h.

Major aspects of personal financial management including budgeting of income and expenditures, transactions and relations with banks, and other lending institutions, insurance and retirement plans, home ownership, personal taxes, savings and investment plans. Alternate years on demand.

G.S. 242: YOU AND THE LAW 3 s.h.

A survey of the major fields of law with an emphasis on historical development, basic legal principles, legal theory and procedure, and their relation to the individual. Each semester.

G.S. 250: THE LIFE AND MINISTRY OF JESUS 3 s.h.

A study of the life and ministry of Jesus in the light of modern contemporary biblical scholarship. Sophomore standing. Alternate years on demand.

G.S. 255: SURVEYING 3 s.h.

Use of the transit, angle mirror, bysometer, sextant, and other measuring instruments; simple map-making exercises and elementary surveying; construction — use of student-made instruments and teaching devices. Prerequisites: Math. 152 or 171 or equivalent. Summers, and on demand.

G.S. 411: SCIENCE AND SOCIETY 3 s.h.

See cross-listing under CHEM. 211.

GEOGRAPHY AND EARTH SCIENCE

NOTE: Geography courses carry social science credit only; Earth science courses carry natural science credit only.

GEOGRAPHY

GEOG. 100: INTRODUCTION TO WORLD GEOGRAPHY 3 s.h.

A geographic study of man's interaction with the global environment and resulting humanized, cultural landscapes. Students examine related problems of population and settlement, the origin and diffusion of culture elements, levels of culture, agricultural and industrial complexes, and other impact upon our deteriorating environment. Each semester.

GEOG. 115: CONSERVATION OF NATURAL RESOURCES 3 s.h.

The use and conservation of the nation's resources of water, land forest, wildlife, minerals, power, and human resources. Each semester.

GEOG. 125: MAP INTERPRETATION 3 s.h.

A broad study of maps, charts, and atlases which is designed to develop an awareness of the great variety of maps available and to promote skill in their use. Emphasis is given to understanding map characteristics and properties needed for effective map usage, projec-

tions upon which maps are commonly drawn, co-ordinates and grid systems, map scales, aerial representations of relief, and statistical data. Prerequisite: Consent of instructor. Offered annually.

GEOG. 225: CARTOGRAPHY I 3 s.h.

A systematic study of the basic concepts of components of thematic map making. Emphasis is placed upon familiarization with and utilization of drafting instruments and equipment essential to map design and construction. Techniques of photographic reproduction of student map projects will also be presented. Two lectures and three hours of laboratory weekly. Prerequisite: Geo. 125 or consent of instructor. Offered annually.

GEOG. 250: GEOGRAPHY OF EUROPE 3 s.h.

A study of European landscapes and regions, which seeks to develop an understanding of the geographic basis of Europe's major economic and social problems. Emphasis is upon western Europe; the Soviet Union is not included in this course. Recommended for majors in history and social science. Every other year.

GEOG. 255: GEOGRAPHY OF ASIA 3 s.h.

A regional course stressing the interrelationship of the economic, social, and political life of the people with their spatial environment. Problems of over population, standards of living, natural resources, industry, and government are emphasized. The Soviet Union is not included in this course. Offered occasionally.

GEOG. 257: GEOGRAPHY OF THE UNITED STATES AND CANADA 3 s.h.

An analysis of geographic problems, natural and cultural, of the U.S. and Canada; the synthesis of physical, biotic, economic, and social patterns and problems of geographic regions of North America; the interrelationship of North American political structures and their ties with the rest of the world. Each semester.

GEOG. 258: GEOGRAPHY OF PENNSYLVANIA 3 s.h.

A regional analysis of Pennsylvania, emphasizing man's cultural and economic response to environmental factors. Special attention is given to the resources of the state, analyzing their extent, their use, the need for well directed conservation, and the regional planning program of the Commonwealth. Offered occasionally.

GEOG. 260: ECONOMIC GEOGRAPHY 3 s.h.

The production, exchange, and use of the basic commodities of the world; the relationship between the physical factors and economic conditions and the patterns of major economic activities, world trade and trade routes; economic landscapes; problems of economic development. Recommended for majors in economics, history, and political science. Every other year.

GEOG. 265: TRADE AND TRANSPORTATION 3 s.h.

A geographic inquiry into world-wide forces of supply and demand and related transport modes and media. The central producer and service functions of population centers; world trade patterns of commodities, economic blocs, stages of economic development; and problems related to the economic interdependence of regions and nations. A course based on concepts learned in Geog. 260. Every other year.

GEOG. 275: HISTORICAL GEOGRAPHY OF THE UNITED STATES 3 s.h.

The natural and cultural regions of the pre-Columbian United States and the geography of settlement and regional development of the country to 1890. This course is very desirable for history majors. Offered occasionally.

GEOG. 300: SPECIAL TOPICS

Topics of special interest in various areas of physical, human or regional geography. The format used will be selected and designed by the professor as the most suitable to the study. Enrollment by consent of the instructor. Offered occasionally.

GEOG. 325: CARTOGRAPHY II 3 s.h.

A systematic study of the new dimensions of cartography in use today. Emphasis is placed upon the techniques used in the construction of three-dimensional maps and models of statistical surfaces, diagrams, cartograms, negative scribing, and color separation. Two lectures and three hours of laboratory weekly. Prerequisite: Cartography I and consent of instructor. Every other year.

GEOG. 350: COMPUTER CARTOGRAPHY 3 s.h.

A systematic study on the newest dimension of cartography in use today. Designing and constructing computer maps will be an integral part of the course. Background in computer programming is not necessary. No prerequisites. Offered occasionally.

GEOG. 385 or E.S. 385: CLIMATOLOGY 3 s.h.

A systematic study of three major components of climatology. Physical aspects of the atmosphere are analyzed as a series of long-term weather phenomena. Regional characteristics of climate are studied on the basis of world-wide patterns. Applied aspects of climate demonstrate the inter-relationship and importance of both physical and regional climatology to man. Acceptable for social science or natural science credit. Prerequisite: E.S. 111 or 280. Every other year.

GEOG. 400: AERIAL PHOTO INTERPRETATION 3 s.h.

A systematic study of aerial photographs for geographic investigation of physical and cultural features of the landscape; the application of remote sensing of topographic and planimetric map construction, agricultural and land use identification, landform study, and forestry. Prerequisite: consent of instructor. Every other year.

GEOG. 450: FIELD GEOGRAPHY 3 s.h.

A systematic study of the techniques essential to geographic field investigation. Emphasis is placed upon practical, first-hand experiences in the field where students learn the techniques and procedures of compass traversing, plane tabling, rural and urban land use surveying, and field research. Prerequisite: Cartography I and consent of instructor. Offered occasionally.

EARTH SCIENCE

E.S. 111: BASIC EARTH SCIENCE 3 s.h.

A survey of the Earth Sciences including Earth-space relations. Earth motions, development of land forms, weather and climate, soils and related vegetation, water as a resource of the land, oceans. Emphasis is on the lithosphere (mountain building and erosion) and the atmosphere. Called Basic Physical Geography in older catalogs. Each semester.

E.S. 150: PHYSICAL GEOLOGY 3 s.h.

A study of the earth, including minerals and rocks, and the processes, both constructional and destructional, which have shaped it since it was formed. Constructional processes

include volcanism, mountain building, and sedimentation. Destructional processes include the erosional activity of streams, glaciers, ground water, waves, and wind. In connection with these topics, an effort is made to acquaint the student with the methods and work of geologists and with some of the research at the frontiers of geology. The course includes a field trip into local areas. No prerequisites. Each semester.

E.S. 200: SOLAR SYSTEM ASTRONOMY 3 s.h.

The course topics include the motions of Earth, moon, and the planets, and their effects on the appearance of the sky; the nature of the sun and the planets; the instruments of the astronomer and the role that the history of astronomy played in the development of our understanding of the sky. The course also includes constellation identification through the use of the planetarium. Each semester.

E.S. 201: STELLAR ASTRONOMY 3 s.h.

The objectives of this course are to study man's understanding of the nature, formation and evolution of those celestial objects that lie beyond the solar system. Topics included are stellar properties and spectra, stellar evolution, special stars and star systems, the milky way and other galaxies, cosmology and cosmogony. The planetarium is used for constellation study and the development of co-ordinate systems. Prerequisite: E.S. 200. Spring, annually.

E.S. 250: HISTORICAL GEOLOGY 3 s.h.

The course deals with the interpretation of the record of the rocks and the geologic history of the earth with emphasis on North America. The physical history of the continent and the development of life, especially backboneed forms, are discussed. Regional geologic history is illustrated by selected areas, notably Appalachia. Prerequisite: E.S. 150. Offered annually.

E.S. 255: LAND FORMS 3 s.h.

A study of the physical forces that sculpture and modify the landforms of the earth, including chiefly weathering, streams, glaciation, and shore processes. Some preliminary work on topographic and geologic maps and rocks is included. Called Geomorphology in older catalogs. Prerequisite: E.S. 150. Offered annually.

E.S. 260: ENVIRONMENTAL GEOLOGY 3 s.h.

A study of the uses of geology in the solution of man's problems with his physical environment. Topics include hazardous geologic environments, mineral and energy resources, water supply, waste disposal and the uses of geology in urban and regional planning. Many examples are drawn from western Pennsylvania. Prerequisite: consent of instructor. Every other year.

E.S. 270: OCEANOGRAPHY 3 s.h.

A study of the physical properties, marine biology, chemistry, and geology of the oceans and to a minor extent, the role of the sea in the history, culture, and technical developments of man. Once annually.

E.S. 280: METEOROLOGY 3 s.h.

A systematic study of the atmosphere, analyzing the laws and underlying principles of atmospheric change. Students have the opportunity to become familiar with the common weather instruments, to observe and record weather data, to read and interpret weather maps, and to consider the problems of aviation growing out of atmospheric conditions. Offered annually.

E.S. 300: SPECIAL TOPICS

Topics of special interest in various areas of earth science. The format used will be selected and designed by the professor as the most suitable to the study. Enrollment by consent of the instructor. Offered occasionally.

E.S. 360: MINERALOGY (MINERALS) 3 s.h.

The identification, uses, physical and chemical properties, occurrence, origin, and crystallography of the common minerals. Prerequisites: at least high school chemistry. Every other year.

E.S. 350: STRUCTURAL GEOLOGY 3 s.h.

A study of the geometry, origin, and recognition of the main structural features of the rocks of the earth's crust, including folds, faults, joints, unconformities, larger igneous bodies, cleavage, lineation, etc. Attention is given to interpreting structure from geologic maps, and an introduction to structural petrology and geophysical methods used in structural geology is included. Prerequisite: E.S. 250. Annually.

E.S. 355: INVERTEBRATE PALEONTOLOGY 3 s.h.

A study of the outstanding invertebrate animals preserved in the fossil record. Also treated is the nature of the fossil record itself, evolution as shown by fossils, and classification problems in paleontology. Prerequisite: E.S. 258. Annually.

E.S. 370: PETROLOGY (ROCKS) 3 s.h.

The identification, occurrence and origin, classification, physical and chemical properties and uses of the common rocks. Includes a brief study of the important rock forming minerals. Called Petrology in older catalogs. Prerequisite: E.S. 150. Every other year.

E.S. 375: SEDIMENTATION AND STRATIGRAPHY 3 s.h.

A study of several aspects of the stratigraphic column, stratigraphic procedures and maps, and the properties, classifications, description, origin, correlation, facies, and environments of sedimentary rocks. Prerequisites: E.S. 150 and 250. Annually.

E.S. 385 or GEOG. 385: CLIMATOLOGY 3 s.h.

A systematic study of three major components of climatology. Physical aspects of the atmosphere are analyzed as a series of long-term weather phenomena. Regional characteristics of climate are studied on the basis of world-wide patterns. Applied aspects of climate demonstrate the interrelationship and importance of both physical and regional climatology to man. Acceptable for social science or natural science credit. Prerequisite: E.S. 111 or 280. Every other year.

GERMAN

In addition to courses listed below, students of German have an opportunity to study for a summer, a term or an entire year in Germany and/or Austria. An opportunity to participate in a program of international business internships in Germany is available for qualified students.

GER. 101: SPECIAL TOPICS: THE EUROPEAN MIND 3 s.h.

Historical and contemporary developments on the European intellectual scene will be covered by experts on individual countries with regard to their relevance for the present American student generation.

The special subject of each semester offering will be announced in pre-registration. Open to all students of the university without prerequisites and may be taken up to three times for credit provided that different topics are offered. Course is taught in the English language. Two-year cycle.

GER. 109: GERMAN LITERATURE IN TRANSLATION 3 s.h.

A study of representative German literary works with particular emphasis on the characters and ideas which have influenced both German and other literatures. The course is conducted in English; no knowledge of German required; no prerequisites. Two-year cycle.

GER. 151: GERMAN I (ELEMENTARY I) 3 s.h.

Essentials of grammar with emphasis on aural comprehension and oral expression. Each semester.

GER. 152: GERMAN II (ELEMENTARY II) 3 s.h.

Continuation of German 151, with increasing emphasis on graded reading material. Prerequisite: German 151 or equivalent. Each semester.

GER. 153: ELEMENTARY GERMAN CONVERSATION 3 s.h.

Practice in conversational patterns and development of useful proficiency for everyday situations and travel. Designed for those students who have met the prerequisites for German 251 but are lacking in aural-oral proficiency. May be taken concurrently with German 251. Spring, annually.

GER. 251: GERMAN III (INTERMEDIATE I) 3 s.h.

Brief systematic review of basic grammar; graded readings, conversation, translation, and composition on selected topics. Prerequisite: German 152 or two years of high school study and/or a satisfactory placement test score. Fall, annually.

GER. 252: GERMAN IV (INTERMEDIATE II) 3 s.h.

Intensive reading of selected works; outside reading with oral and/or written reports. Prerequisite: German 251 or a satisfactory placement test score. Spring, annually.

GER. 253: SCIENTIFIC GERMAN 3 s.h.

A study of scientific terminology and style, with extensive readings in various scientific fields. Prerequisite: German 251 or equivalent. Science and mathematics majors may substitute this course for German 252. Three-year cycle.

GER. 254: COMMERCIAL GERMAN 3 s.h.

A study of commercial terminology and style, with extensive practice in the writing of business letters of various kinds. Prerequisite: Elementary German. Two-year cycle.

GER. 255: GERMAN CIVILIZATION I 3 s.h.

A survey of German geography, history, literature, and culture, designed to equip students with the materials and understanding necessary to the presentation of the languages as rich, meaningful, and integral part of a great civilization. Prerequisite: German 252 or four years of high school study and/or satisfactory placement test score. Required for German majors. Three-year cycle.

GLF 256: GERMAN CIVILIZATION II 3 s.h.

Complement to German 255. Required for German majors. Three-year cycle.

GER. 260: THE GERMAN SHORT STORY 3 s.h.

A study of representative *Novellen* of the nineteenth and twentieth centuries. All readings and discussions in German. Two-year cycle.

GER. 290: CONTEMPORARY GERMAN PROSE 3 s.h.

Recent literary and linguistic developments in German prose style. The short story and news media as materials for training in oral expression and stylistics. Three-year cycle.

GER. 350: ADVANCED CONVERSATION AND INTERPRETATION 3 s.h.

Interpreting and translating skills, stressing everyday idioms and practical needs, especially for employment in government and industry. Four-year cycle.

GER. 351: ADVANCED GERMAN GRAMMAR AND COMPOSITION 3 s.h.

Intensive oral and written drill, with emphasis on finer points of grammar, colloquial, and idiomatic usage. English-to-German translation, free composition, and conversation on everyday topics. Required for German majors. Three-year cycle.

GER. 352: SURVEY OF GERMAN LITERATURE THROUGH THE CLASSICAL AGE 3 s.h.

Study and discussion of the main trends of German thought and literary expression. Emphasis is placed upon the works of Goethe, Schiller, and Lessing. Four-year cycle.

GER. 353: THE MODERN GERMAN DRAMA 3 s.h.

German drama from the middle of the 19th Century to the present, covering representative writers of the Realist, Naturalist, and Expressionist movements, as well as selected contemporary writers. Four-year cycle.

GER. 355: GERMAN ROMANTICISM 3 s.h.

The older and younger schools of German Romanticism (Jena, Berlin, and Heidelberg) with emphasis on the revival of folk poetry and consideration of influences upon American Romanticism. Representative authors: Holderlin, Novalis, Arnim, and Brentano. Four-year cycle.

GER. 358: CLASSICAL GERMAN LITERATURE: GOETHE,
SCHILLER AND LESSING 3 s.h.

Goethe's *Faust* and other great works of the Golden Age of German literature. Four-year cycle.

GER. 361: GERMAN LYRIC POETRY 3 s.h.

The German lyric from Moerike, Hofmannsthal, Rilke, and George to the post-expressionist movement and contemporary poets such as Benn, Nelly Sachs, and Enzensberger. Four-year cycle.

GER. 451: SUPERVISED READINGS IN GERMAN LITERATURE 3 s.h.

This course is devoted to selected readings determined in relation to the needs and interests of the individual major.

HEALTH AND PHYSICAL EDUCATION

ACTIVITY AND RECREATION COURSES

The following activity courses are offered for fulfillment of the general education requirement. Courses emphasize the fundamental techniques, strategy, and rules of the activity. Offered each semester.

HPE 140:	ARCHERY	1 s.h.
HPE 141:	BADMINTON	1 s.h.
HPE 142:	BOWLING	1 s.h.
HPE 143:	GOLF	1 s.h.
HPE 144:	HANDBALL AND RACQUETBALL (Men's Rules)	1 s.h.
HPE 154:	RACQUETBALL (Women's Rules)	1 s.h.
HPE 146:	CROSS COUNTRY SKIING	1 s.h.
HPE 147:	BEGINNING TENNIS	1 s.h.
HPE 148:	WRESTLING	1 s.h.
HPE 150:	CANOEING	1 s.h.
HPE 161:	BASKETBALL (Men's Rules)	1 s.h.
HPE 162:	BASKETBALL (Women's Rules)	1 s.h.
HPE 163:	VOLLEYBALL (Men's Rules)	1 s.h.
HPE 164:	VOLLEYBALL (Women's Rules)	1 s.h.
HPE 247:	INTERMEDIATE TENNIS	1 s.h.
HPE 249:	CAMPING AND OUTDOOR RECREATION	2 s.h.

AQUATIC COURSES

The following aquatic courses are offered for fulfillment of the general education requirement. Offered each semester.

HPE 131:	BEGINNING SWIMMING	1 s.h.
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For students who cannot swim one length of the pool. The course consists of drown-proofing and elementary back, breast, and freestyle strokes.

HPE 230:	SENIOR LIFE SAVING	1 s.h.
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Prerequisite: Students must demonstrate advanced swimming skills. Successful completion of the course leads to the Red Cross Life Saving Certificate.

HPE 231: INTERMEDIATE SWIMMING 1 s.h.

Prerequisite: Students should be able to swim one length of the pool. The course consists of multi-stroke refinement, drownproofing, and physical conditioning through swimming.

HPE 233: SPRINGBOARD DIVING 1 s.h.

Prerequisite: Students should be competent in the basic swimming strokes and drownproofing. The course consists of advanced swimming and diving skills, stroke refinement, aquatic games, and recreational skills.

HPE 330: WATER SAFETY INSTRUCTOR 1 s.h.

Prerequisite: Students must hold a valid Red Cross Life Saving Certificate. Successful completion of the course leads to a Red Cross Safety Instructor Certificate.

HPE 332: ADVANCED AQUATICS 1 s.h.

Prerequisite: Students should be competent in the basic swimming strokes and drownproofing. The course consists of advanced swimming and diving skills, stroke refinement, aquatic games, and recreational skills.

DANCE COURSES

HPE 171: MODERN DANCE 1 s.h.

A study in beginning dance technique, incorporating both barre and centre work. Correct form and body placement along with flexibility and control are covered.

HPE 173: AEROBIC DANCING I 1 s.h.

This course is designed to integrate basic modern dance techniques with scientific principles of aerobic fitness. An enjoyable way to develop cardiovascular endurance.

HPE 273: AEROBIC DANCING II 1 s.h.

A continuation of Aerobic Dancing I, with advanced dance routines and techniques. Emphasis on cardiovascular endurance as well as general body conditioning. Prerequisite: Basic knowledge in dance or Aerobic Dancing I.

HEALTH AND FIRST AID COURSES

HPE 111: HEALTH EDUCATION 2 s.h.

Consideration of the physical and mental equipment of the individual and of the practical application of health knowledge and concepts in personal, family, community, and environmental living. Special emphasis is placed in the areas of mental health, drug abuse, human sexuality and marriage, and the major diseases and health problems confronting society. A requirement for all students. Offered each semester through the team teaching concept.

HPE 314: CARDIO PULMONARY RESUSCITATION 1 s.h.

A requirement for the Athletic Coaching Program, the course is designed to follow the recommendations and guidelines of the American Red Cross. Students will receive an American Red Cross CPR Certificate upon successful completion of the course. Each semester.

HPE 317: FIRST AID AND SAFETY 2 s.h.

The responsibilities and duties of the teacher in the development and teaching of programs in first aid and safety that are related to the student's school and community. The American Red Cross Standard First Aid Course will be included. Each semester.

PHYSICAL FITNESS COURSES

HPE 181: ADAPTED PHYSICAL EDUCATION 1 s.h.

A modified or corrective physical education course for those who by reason of illness or disability are unable to participate in the more vigorous forms of physical education activities. On demand.

HPE 182: POSTURE AND BODY MECHANICS 1 s.h.

An analysis and application of correct posture and body mechanics through a physical fitness program of exercise and aerobic dance. Each semester.

HPE 185: PHYSICAL FITNESS AND CONDITIONING 1 s.h.

This course enables students to develop a fitness and conditioning program to fit their individual needs through knowledge gained in areas such as nutrition, use of conditioning equipment, weight control, and fitness tests. Each semester.

HPE 186: PHYSICAL FITNESS THROUGH WEIGHT LIFTING 1 s.h.

This fitness course will cover all basic weight lifting techniques and modern principles for developing and improving anaerobic fitness, for both male and female students. Each semester.

SPECIALIZED COURSES

Athletic Coaching Program

The athletic coaching program is established for those who intend to coach in inter-school athletic programs but do not have a degree in physical education.

The minimum requirement of this program is 19 credit hours, 12 of which are required. The other 6 credit hours may be selected from the Theory and Techniques of Coaching courses: HPE 343, 344, 345, 346, 347, 348, 351, 352, 353, or 354.

HPE 343-354: THEORY AND TECHNIQUES OF COACHING

The purpose of these courses is to acquire knowledge in theories and techniques of coaching specific sports. Main areas covered are: rules and regulations, fundamentals, organizational principles, specific conditioning programs, scouting, and technical tactics.

HPE 343: THEORY AND TECHNIQUE OF COACHING GOLF 1 cr.

Spring, odd numbered years.

HPE 344: THEORY AND TECHNIQUE OF COACHING TRACK
AND FIELD 2 cr.

Spring, even numbered years.

HPE 345: THEORY AND TECHNIQUE OF COACHING SWIMMING 2 cr.

Spring, odd numbered years.

HPE 346: THEORY AND TECHNIQUE OF COACHING GYMNASTICS 2 cr.

Fall, even numbered years.

HPE 347: THEORY AND TECHNIQUE OF COACHING TENNIS 1 cr.

Fall, even numbered years.

HPE 348: THEORY AND TECHNIQUE OF COACHING WRESTLING 2 cr.

Spring, odd numbered years.

HPE 351: THEORY AND TECHNIQUE OF COACHING BASKETBALL 2 cr.

Fall, odd numbered years.

HPE 352: THEORY AND TECHNIQUE OF COACHING BASEBALL 2 cr.

Spring, odd numbered years.

HPE 353: THEORY AND TECHNIQUE OF COACHING VOLLEYBALL 2 cr.

Spring, even numbered years.

HPE 354: THEORY AND TECHNIQUE OF COACHING FOOTBALL 2 cr.

Fall, even numbered years.

REQUIRED COACHING COURSES

HPE 406: ATHLETIC INJURIES 3 cr.

This is a course on care and prevention of athletic injuries. The latest principles and techniques of taping common athletic injuries and new theories on the prevention of athletic injuries are the basics of the course. Spring, annually.

HPE 407: PHYSIOLOGICAL FOUNDATIONS OF COACHING 3 cr.

The primary purpose of this course is the study of basic scientific principles of physiology and how they can be applied to conditioning programs for the athlete. All phases of physical training are covered along with evaluations of modern training devices. Spring, annually.

HPE 408: PRINCIPLES AND PROBLEMS OF ATHLETIC COACHING 3 cr.

A study of modern techniques and practices used in the organizational procedure of athletic programs. Major problem areas such as practice and game organization, purchase and care of equipment, budget and finances, public relations, legal liability, drug abuse, and sports psychology. Modern trends and issues in athletics are analyzed as well as various philosophical views as a part of the educational curriculum. Fall, annually.

HPE 409: KINESIOLOGICAL FOUNDATIONS OF COACHING 3 s.h.

This course is designed to help the coach increase his or her understanding of basic scientific information concerning athletic movement by utilizing the conceptual approach. The three main areas of study are applied anatomy, the production of motion and application. The application of scientific principles to athletic skills will aid the coaching and teaching of skills. Fall, annually.

ELEMENTARY MAJOR COURSES

HPE 223: PHYSICAL EDUCATION FOR ELEMENTARY MAJORS 1 cr.

Required of all students majoring in Elementary Education. Emphasis is placed on modern physical education skills and activities of the elementary child. Each semester.

HPE 323: MODERN CURRICULUM AND METHODS IN
ELEMENTARY PHYSICAL EDUCATION 1 cr.

Required of all students majoring in Elementary Education, the course is designed to give the elementary major practical experience in integrating physical activities into academic learning. Each semester.

HPE 326: ADAPTED PHYSICAL EDUCATION FOR THE
ELEMENTARY SCHOOL 3 cr.

The study and application of the modified or restricted activities to be provided at all grade levels for the child who may not safely participate in the regular instructional class. Fall, alternate years.

HISTORY

HIST. 111: ANCIENT AND MEDIEVAL CIVILIZATION 3 s.h.

The course includes a survey of prehistoric cultures and civilization from its historical beginning to 1300. Its purpose is to present a knowledge of the origins of the broad social, political, intellectual, and economic movements of the past from which the student may gain an understanding of civilization today. Each semester.

HIST. 112: EARLY MODERN CIVILIZATION, 1300 TO 1815 3 s.h.

A study of significant movements and events from 1300 to 1815. The course emphasizes the interrelationships between cultures of various world regions. The influence of European development on other world areas is also stressed. Each semester.

HIST. 113: MODERN CIVILIZATION, 1789 TO THE PRESENT 3 s.h.

A study of significant movements and events of 1789 to the present. The course emphasizes interrelationships between the cultures of various world regions, with major attention on the influence European development has exerted on other world areas in the 19th and 20th centuries. Each semester.

HIST. 120: UNITED STATES HISTORY TO 1877 3 s.h.

A survey of United States history from the period of exploration through the Reconstruction period. Each semester.

HIST. 121: UNITED STATES HISTORY SINCE 1877 3 s.h.

A survey of United States history from Reconstruction to the present. Each semester.

HIST. 150: HISTORY IN THE HEADLINES 3 s.h.

The course stresses the historical antecedents and backgrounds of current events and issues, excluding those of a purely domestic nature. A basic news source such as *The Christian Science Monitor* will be used as a text and supplemented by library materials. Each semester.

HIST. 215: TOPICS IN AMERICAN HISTORY 3 s.h.

A topical approach to the study of American history, permitting students to pursue an indepth examination of selected problems. No prerequisites. On demand.

HIST. 216: BUSINESS IN THE AMERICAN ECONOMY 3 s.h.

A survey of the historical development of the American economy, emphasizing the role of the private business sector. On demand.

HIST. 220: TOPICS IN NON-WESTERN AND THIRD WORLD HISTORY 3 s.h.

A topical approach to the study of non-western and Third World history and culture, permitting students to examine selected problems. On demand.

HIST. 235: TOPICS IN EUROPEAN HISTORY 3 s.h.

A study of the major social, economic, and political ideas of Europe in the Eighteenth, Nineteenth, and Twentieth Centuries. On demand.

HIST. 254: HISTORY OF LATIN AMERICA: COLONIAL PERIOD 3 s.h.

This course surveys the development of Colonial Latin America from its discovery to 1825. The economic, social, political, and cultural development receives detailed attention. Fall, alternate years.

HIST. 255: HISTORY OF LATIN AMERICA: NATIONAL PERIOD 3 s.h.

The main emphasis of this course is on the history of the Latin American countries since 1825. The economic, social, political, and cultural development receives detailed attention. Fall, alternate years.

HIST. 256: HISTORY OF PENNSYLVANIA 3 s.h.

A study of the founding and development of Pennsylvania from its colonial beginning to the present time. Emphasis is placed on the social, economic, and political development in the different periods of its history. Special attention is given to the diversity of the people, their institutions and problems, and the growth of Pennsylvania to a leading position in our modern industrial world. Fall, annually.

HIST. 260: FASCISM, HITLER, AND THE HOLOCAUST 3 s.h.

An examination of the rise of the fascist government in Europe from 1919 through World War II. Special emphasis is given to the rise of Naziism and the personalities of the Third Reich leadership. The course ends with an examination of the holocaust. Spring, annually.

HIST. 275: INDIA THROUGH THE AGES 3 s.h.

Examination of the historical development of Indian Civilization from its early origins to the coming of the Europeans, with emphasis on the classical period, religion, social organizations, and the ancient Hindu and Medieval Moslem periods. Spring, alternate years.

HIST. 277: VIETNAM: WAR AND PEACE 3 s.h.

The course presents an outline of the history of Vietnam from its colonization by the French during the 19th century to the so-called Peace Settlement of 1973 and the new war which followed it. The main focus of the course will be from 1945, and the nature of the Vietnamese Revolutionary War will be examined.

The history of American involvement, their objectives and consequences of the Vietnamese debacle will be studied. The course will end by considering the global impact of war. Fall, annually.

HIST. 286: HISTORY OF MODERN CHINA AND JAPAN 3 s.h.

A historical study of the transformation which has taken place in China and Japan in modern times as a result of an external impact as well as forces within far Eastern societies. Fall, alternate years.

HIST. 305: THE HISTORY OF AMERICAN LABOR 3 s.h.

This course examines the history of the American working men and women from the colonial period to the present. It examines not only the growth of the trade union movement and its socio-political and economic impact, but also the nature of the work performed by labor and the way laboring people have lived. On demand.

HIST. 320: MEDIEVAL HISTORY 3 s.h.

A study of the Middle Ages from the fall of Rome to 1500. Prerequisite: Hist. 111 or consent of the instructor. Every third semester.

HIST. 330: EUROPE DURING THE RENAISSANCE 3 s.h.

A survey of the course of Europe's development from the thirteenth through the sixteenth centuries with emphasis on political, social, economic, and cultural trends and achievements and the problems of historical interpretation they pose. Every third semester.

HIST. 335: EUROPE DURING THE REFORMATION 3 s.h.

A survey of Europe's development during the sixteenth and seventeenth centuries with particular attention to the role of religion and religious issues and to the interaction between religion and political, economic, and cultural affairs. Every third semester.

HIST. 340: HISTORY OF EUROPE FROM 1660 TO 1814 3 s.h.

A study of the social, economic, political, religious, and cultural experiences of the European people from the Age of Louis XIV through the Napoleonic Wars. On demand.

HIST. 345: HISTORY OF EUROPE FROM 1815 TO 1924 3 s.h.

A study of the social, economic, political, religious, and cultural experiences of the European people from the Congress of Vienna to the death of Lenin. On demand.

HIST. 351: COLONIAL AMERICA 3 s.h.

A study of colonial history beginning with the European background of colonization and continuing through the American Revolution. On demand.

HIST. 354: RECENT AMERICAN HISTORY 3 s.h.

A study of the political, social, and economic developments and foreign affairs of the U.S. from World War I to the present. On demand.

HIST. 357: TUDOR-STUART ENGLAND 3 s.h.

An examination of the significant political, cultural, social and religious developments in England from the accession of Henry VII to the death of Queen Anne and the transition to the House of Hanover. Spring, annually.

HIST. 359: AMERICAN FRONTIER 3 s.h.

This course includes the geographic continuity of westward expansion, and the significance of the frontier in the development of the U.S. Spring, annually.

HIST. 361: HISTORY OF AMERICAN SCIENCE AND TECHNOLOGY 3 s.h.

This course places emphasis on the historical survey of the development of American science and technology and of their effect of growth of America's culture. America's contributions to the rest of the world along the lines of science and technology are stressed. On demand.

HIST. 362: HISTORY OF AFRO-AMERICA 3 s.h.

A survey of Afro-American history from its African beginnings to contemporary times (1969). Special emphasis will be placed on tracing the role of the Negro in American History in order to develop a better perspective on his contribution to the American way of life. A close study will be made in the junctures of American History where the problems of the Afro-American took on new meaning to American growth. On demand.

HIST. 365: RUSSIA TO THE TWENTIETH CENTURY 3 s.h.

Russia's development from the early centuries of the Christian era to the present century. Stress on the period beginning with the reign of Peter the Great with special attention to the nineteenth and early twentieth centuries as background for the Soviet period. Spring, alternate years.

HIST. 366: RUSSIA IN THE TWENTIETH CENTURY 3 s.h.

Russia's development in the twentieth century with major attention to Communism in theory and practice and emphasis on the role of the Soviet Union in world affairs. Spring, alternate years.

HIST. 368: CHINA SINCE 1949 3 s.h.

An examination of the Chinese revolutionary struggle under Mao Tse-Tung and the Communist programs of socioeconomic construction through ideology and organization. Special emphasis will be given to internal restructuring and international relations. On demand.

HIST. 370: HISTORY OF THE MIDDLE EAST 3 s.h.

This survey is an area of study of the early classical era by way of an advanced intensive exploration of the civilization in the Mediterranean East and Middle East. After an introduction to the religion of Judaism and Christianity in their political setting, the cultural contributions of the Semites, Greeks, and Romans are examined. The Islamic Age is stressed. Emphasis is placed upon modern identification of the countries that make this an explosive part of the world — Jordan, Israel, Lebanon, Iran, Iraq, Arabia, Syria, Egypt. Their relationship to the great powers is given attention. On demand.

HIST. 385: SOUTHEAST ASIA SINCE 1945 3 s.h.

Different systems of Western colonial rule, with major emphasis on territorial expansion, political administration, and economic patterns; reaction to alien rule, rise of nationalism, and social, economic, and political problems since independence. On demand.

HIST. 401: INDEPENDENT STUDY 3 s.h.

Students may explore special fields of interest after locating a department advisor and submitting a plan of study. On demand.

HIST. 451: DIPLOMATIC HISTORY OF THE UNITED STATES FROM THE AMERICAN REVOLUTION TO 1912 3 s.h.

This course is designed to examine patterns of realism and idealism in American diplomacy from the Revolution to the Era of T.R. and Taft. Attention will be given to diplomatic thought on concepts such as the national interest, the Monroe doctrine, manifest destiny, the balance of power, and the emergence of the United States as a world power. On demand.

HIST. 452: DIPLOMATIC HISTORY OF THE UNITED STATES SINCE 1912 3 s.h.

This course is designed to examine patterns of realism and idealism in American diplomacy from Woodrow Wilson to the present. Attention will be focused on diplomatic thought upon the issues of the national interest, World War I, Neutrality, World War II, Internationalism, the Cold War, and the United States response to Europe and new emerging powers. On demand.

HIST. 458: ENGLISH CONSTITUTIONAL HISTORY 3 s.h.

A consideration of constitutional government in England from the beginning of English history to the present. A study of governmental powers, political and judicial processes, and the relationship of liberty and authority to the individual living under the government is included. On demand.

HIST. 463: CIVIL WAR AND RECONSTRUCTION 3 s.h.

This course is a basic study of the growth of sectional differences between North and South from 1820 to 1850. It further examines the failure of compromise efforts in the 1850's and the causes of secession. The war and the consequences of reconstruction policies to 1877 are traced in light of modern civil rights problems. On demand.

HIST. 471: THE FRENCH REVOLUTION 3 s.h.

The Old Regime and its critics of the 18th century will be examined; the social and political changes in France from 1798 to 1815 will be analyzed; the diplomatic and international influence of the French Revolution will be surveyed. On demand.

HONORS

HON. 300: HONORS COLLOQUIUM 2 s.h.

A regular meeting of the students in the honors program, interested faculty members, and occasional guests from outside the college for discussion of selected topics of broad interest. Prerequisite: consent of the Committee for Talented Students.

HUMANITIES

HUM. 120: HUMANITIES I: ANTIQUITY THROUGH THE MIDDLE AGES 3 s.h.

This interdisciplinary course in the humanities focuses on western man's values, beliefs, and accomplishments as reflected in the arts, and man's historical development for the Classical period to the close of the Middle Ages. No prerequisite. On demand.

HUM. 121: HUMANITIES II: THE RENAISSANCE TO THE PRESENT 3 s.h.

A continuation of the study of western culture from the Renaissance to the present. No prerequisites. On demand.

LIBRARY SCIENCE

L.S. 255: INTRODUCTION TO MEDIA LIBRARIANSHIP 3 s.h.

Broad overview of libraries and library media centers and the profession of librarianship beginning with the history of libraries and concluding with the impact of technology on libraries. Fall, annually.

L.S. 257: BASIC INFORMATION SOURCES AND SERVICES 3 s.h.

Emphasis on the approaches to locating information. The criteria for selection of reference materials and the examination of reviewing media for new reference aids. Organization of reference service. The study of a selected list of reference works. Spring, annually.

L.S. 258: SELECTION OF LIBRARY MEDIA 3 s.h.

Familiarity with basic bibliographical tools, including current reviewing media and the book trade. The establishment of policies and criteria for the selection of evaluation of book and non-book materials. Prerequisite to L.S. 356 and L.S. 358. Fall, annually.

L.S. 260: DEVELOPMENT AND ADMINISTRATION OF LIBRARIES 3 s.h.

The development of the library as an institution. The concept of philosophy of librarianship. General principles of administration and their application to the organization and management of different types of libraries. Problems and practices with respect to a library's function, staff, collections, and building. Fall, odd numbered years.

L.S. 356: MEDIA FOR ADOLESCENTS 3 s.h.

Survey of adolescent literature and other media. Study of the reading interests of high school age students and characteristics of adolescent literature and methods of introducing young adults to books. Techniques of preparing and delivering book talks and developing young adult programs. Prerequisite: L.S. 258 or permission of the instructor. Fall, annually.

L.S. 357: ORGANIZATION OF MEDIA 3 s.h.

Organization of print and non-print materials for effective service. Principles and methods of descriptive cataloging. The structure and application of the Dewey Decimal Classification, the Library of Congress Classification, and standard subject authority lists. The use of printed cards and the utilization of other work simplification techniques. The study of filing rules. Maintenance of library catalogs — shelf lists, divided and dictionary card catalogs, and the printed book catalog. Fall, annually.

L.S. 358: MEDIA FOR CHILDREN 3 s.h.

Survey of children's literature and related materials. A study of the principles of selection and evaluation of books, periodicals, and other materials for children. Reading guidance, with attention to materials for special groups. Development of general and subject bibliographies, preparation of annotations. Techniques of story-telling and the selection of materials for the story hour. Prerequisite: L.S. 258 or permission of the instructor. Spring, annually.

L.S. 360: ADMINISTRATION OF SCHOOL MEDIA CENTERS 3 s.h.

Study of the objectives and functions of the modern school library media centers. Techniques and administrative procedures, budget preparation, personnel space and equipment. Acquisition, preparation, and the circulation of all forms of media. Maintenance of the collection. Standards for evaluation of school library media centers. Relations with other school libraries and the public library. The development of a functional school library media program. Spring, annually.

L.S. 432: COLLOQUIUM no credit

A series of lectures, discussions, and film demonstrations, presented by visiting lecturers and members of the staff. Required of all library science students. Each semester.

L.S. 455: SPECIAL TOPICS IN LIBRARIANSHIP 3 s.h.

In-depth discussion, study, and research of a selected topic related to the role of the library in responding to social issues, service to special groups, or problem areas, such as Media and Minorities, OCLC On-Line Bibliographic Control and Media Programs for the Gifted. (Not creditable toward library science certification.) On demand.

L.S. 457: INDEPENDENT STUDY/SEMINAR 1-3 s.h.

Opportunity to explore in depth a facet of librarianship according to need or interest, under the direction of a faculty member of the school. Special area to be approved by a faculty committee. Development of research techniques. The preparation of a scholarly paper or completion of a special project.

L.S. 459: MEDIA, METHODS, AND THE CURRICULUM 3 s.h.

Planning for the effective use of school library media services in cooperation with the instructional staff. Examination of school library media philosophies and educational objectives. Development of a library media program. Examines the librarian's role in designing curriculum, in developing teaching-learning strategies, and in working with teachers, students and administrators. Prerequisites: L.S. 257, 258, either 356 or 360, 490, and Comm. 440. Spring, annually.

L.S. 490: LIBRARY MATERIALS AND SERVICES FOR EXCEPTIONAL STUDENTS 3 s.h.

An opportunity for library science students to explore the unique characteristics and instructional needs of exceptional students who use the school library in order to develop collections of materials and to design programs of services to accommodate those needs. The role of bibliotherapeutic techniques will be investigated to determine their validity for the exceptional student. Fall, annually.

MATHEMATICS

The usual entry level for students in the natural sciences and mathematics and for other students with good math ability and background, regardless of their major, is Math 172, but science and math majors with insufficient background may select Math 115, 152, or 171. Business students normally enter at Math 131, Elementary Education majors at Math 111. Math 112 is the usual course for students with no mathematics requirement outside general education, but Math 221 is a good alternative and other electives are also available. For more detail, students should contact their advisors or the chairman of the Mathematics Department.

MATH. 100: PRACTICAL MATHEMATICS 3 s.h.

An introduction to basic algebraic concepts, review of algebraic and mathematical manipulation, emphasis on individual attention. (No student who has satisfactorily completed another mathematics course may subsequently receive credit toward graduation for Math 100.) Each semester, each summer.

MATH. 111: BASIC MATHEMATICS FOR ELEMENTARY TEACHERS 3 s.h.

Structure of the real number system. Elementary set theory. Open only to students in the College of Education, others only with permission of the department. Each semester.

MATH. 112:	EXCURSIONS IN MATHEMATICS	3 s.h.
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A course designed to acquaint the student with the nature and scope of modern mathematics and its applications. Emphasis is on concepts and understanding rather than the acquisition of techniques. The course is intended for majors in the arts, humanities, and social sciences. Each semester.

MATH. 115: COLLEGE ALGEBRA 3 s.h.

Polynomials, equations and inequalities, exponents and radicals, logarithms. Prerequisite: 2 years of high school algebra, or Math 100. Students completing Math 131 or 171 may not select Math 115. Each semester

MATH. 131:	MATHEMATICS FOR BUSINESS AND ECONOMICS	3 s.h.
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Mathematical techniques with special applications in business and related areas. Topics include: matrices, linear programming, probability, and statistics. Prerequisite: three years of high school mathematics. Each semester.

MATH. 152: TRIGONOMETRY 3 s.h.

Properties of trigonometric functions and their inverses. Spring, annually.

MATH. 171: PRECALCULUS 4 s.h.

Review of high school algebra, inequalities, analytic trigonometry, logarithms, elementary theory of equations, complex numbers, and mathematical induction. Prerequisite: 2 years of high school algebra. Students may not receive credit for both Math. 115 and 171. Each semester.

MATH 211:	MODERN CONCEPTS OF MATHEMATICS FOR ELEMENTARY TEACHERS	3 s.h.
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Investigation of selected topics considered essential to the mathematical background of an elementary education major. Included are introductions to: mathematical reasoning and problem solving techniques, probability and statistics, geometry, and computer programming. Each semester.

MATH. 212:	INTUITIVE GEOMETRY	3 s.h.
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An intuitive overview of geometry; axiomatic structure of geometry, basic constructions, proofs. Not open to mathematics majors. Prerequisite: any 100 level Math. course. Alternate years.

MATH. 213: INTUITIVE ANALYSIS 3 s.h.

An elementary introduction to the basic properties of the real number system and the calculus, including functions, sequences, limits, continuity, integrals, and derivatives. Prerequisite: Any 100-level mathematics course. Spring, annually.

MATH. 214. FINITE MATHEMATICS 3 s.h.

An introduction to the basic properties of finite mathematics, including partitions of sets, counting theorems, permutations, combinations, probability. Suggested for students in elementary education. Fall, annually.

MATH. 215: MATHEMATICAL CONCEPT LABORATORY — AN ACTIVITY-ORIENTED APPROACH 3 s.h.

Development of certain concepts of mathematics using an activity-oriented approach.

Class is conducted in a laboratory atmosphere. Topics considered are the rational number system, number theory, induction, measurement, geometric shapes. Each semester.

MATH. 221: STATISTICS WITH APPLICATIONS 3 s.h.

Basic principles and methods of statistical analysis useful in the social sciences, biology, and education, designed specifically for students not majoring in mathematics. (Not open to mathematics majors.) Each semester. *139 Med. Tech. Degree Program*

MATH. 232: CALCULUS FOR BUSINESS I* 3 s.h.

Differential calculus with application to business and the social sciences. Topics include limits, derivatives, maxima and minima, and introduction to integration related topics. Prerequisite: Math. 131, 171 or the equivalent. Each semester.

MATH. 233: CALCULUS FOR BUSINESS II* 3 s.h.

Application of integral calculus to business and the social sciences. Topics include rules of integration, definite and indefinite integrals, series and partial derivatives. Prerequisite: Math. 132 or the equivalent. Each semester.

MATH. 240: DISCRETE MATHEMATICAL STRUCTURES 3 s.h.

Mathematical expertise necessary to facilitate the efficient computer manipulation of data. Topics include permutations and combinations, boolean logic, lattices, graphs, etc. Prerequisite: Math 171, CIS 151 or 163. Each semester.

MATH. 255: SURVEYING 3 s.h.

Use of the transit, angle mirror, bysometer, sextant, and other measuring instruments; simple map-making exercises and elementary surveying; construction — and use of student-made instruments and teaching devices. Prerequisites: Math. 152 or 171 or equivalent. Summers, and on demand.

MATH. 270: CALCULUS WITH ANALYTIC GEOMETRY I 4 s.h.

Elementary analytic geometry, limits continuity, differentiability. Prerequisite: Math. 171 or its equivalent. Each semester.

MATH. 271: CALCULUS WITH ANALYTIC GEOMETRY II 4 s.h.

Review of limits, definition of Reimann, integral and applications. Integration techniques; topics in analytic geometry. Prerequisite: Math 270. Each semester.

MATH. 272: CALCULUS WITH ANALYTIC GEOMETRY III 4 s.h.

Basic properties of limits, continuous and differentiable functions. Sequences, series, solid analytic geometry, functions of several variables, multiple integrals. Prerequisite: Math. 271. Each semester.

MATH. 350: ORDINARY DIFFERENTIAL EQUATIONS 3 s.h.

First order differential equations. Linear differential equations of higher order; systems of differential equations. Series methods. Prerequisite: Math. 272. Fall, annually.

*Math. 232-3 are designed for students outside the natural sciences. Students in Math and Sciences and better prepared students in other disciplines are encouraged to select Math. 270-271 instead.

MATH. 357: MODERN GEOMETRY 3 s.h.

Axiomatic treatment of topics in geometry. Prerequisite: Math. 272. Fall, alternate years.

MATH. 360, 460: NUMERICAL METHODS IN MATHEMATICS I, II 3 s.h. each

Types of error, calculus of finite differences, numerical evaluation of integrals, algorithms for the solution of algebraic equations, and systems of algebraic equations with applications to selected problems and computer programming of algorithms. Prerequisite: Math 271. Each spring semester (360); alternate fall semesters (460).

MATH. 369: BOOLEAN ALGEBRA 3 s.h.

An introduction to the theory of Boolean Algebra, with applications to the theory of sets, logic, and electromechanisms. Prerequisite: Math. 272 or permission of instructor. Fall, alternate years.

MATH. 370: INTRODUCTION TO LINEAR ALGEBRA 3 s.h.

Introduction to vector spaces, linear transformations, matrices, determinants, and related topics. Prerequisite: Math. 271. Each semester.

MATH. 451, 452: MODERN ALGEBRA I, II 3 s.h. each

An introduction to groups, rings, integral domains and fields. Prerequisite: Math. 272. Fall and spring respectively.

MATH. 454: THEORY OF NUMBERS 3 s.h.

Factorization, congruence, quadratic reciprocity. Number theoretic functions, diophantine equations, continued fractions. Prerequisite: Math. 272. Spring, alternate years.

MATH. 455: PROBABILITY 3 s.h.

Basic concepts of elementary probability; probability in finite spaces; conditional probability; independent trials; sophisticated counting; probability in relation to random variables. Prerequisite: Math 272. Fall, annually.

MATH. 456: MATHEMATICAL STATISTICS 3 s.h.

Mathematical expectation; discrete and continuous random variables; probability densities; sampling distributions; point estimations; interval estimation; tests of hypotheses; regression and correlation; analysis of variation; moment-generating functions. Prerequisites: Math. 272 and 352. Spring, alternate years.

MATH. 471, 472: INTRODUCTION TO REAL ANALYSIS 3 s.h.

Limits, continuity, differentiability, integrability, and convergence for functions of a real variable and several variables. Prerequisite: Math 272. Fall and spring, respectively.

MATH. 473: ELEMENTARY TOPOLOGY 3 s.h.

Topological spaces, metric spaces, compactness, connectedness. Prerequisite: Math. 272. Spring, alternate years.

MATH. 480: TOPICS 3 s.h.

To permit offering special topics reflecting the interests of the students. The specific topic to be covered each term will be announced in advance. Prerequisite: Math. 272 and permission of the instructor.

MATH. 490, 491, 492: SEMINAR I, II, III 1 s.h. each

Seminar in mathematics. An oral and written presentation is required. Each semester.

MATH. 499: INDEPENDENT STUDY 1-3 s.h.

Individual study under faculty supervision. Prerequisite: 12 hours of Math. numbered 300 or above and written consent of the department chairman.

MEDICAL TECHNOLOGY PROFESSIONAL STUDY YEAR

MT 401: CLINICAL MICROBIOLOGY 6-9 s.h.

Identification and clinical pathology of bacteria, fungi, viruses and parasites. Techniques to isolate, stain, culture and determine antimicrobial susceptibility. Instrumentation; quality control.

MT 402: CLINICAL CHEMISTRY 6-9 s.h.

Enzymology, endocrinology, biochemistry of lipids, carbohydrates and proteins, metabolism of nitrogenous end products, physiology and metabolism of fluids and electrolytes, and toxicology as related to the body and diseases. The technical procedures include colorimetry, spectrophotometry, electrophoresis, chromatography, automation and quality control.

MT 403: CLINICAL HEMATOLOGY/COAGULATION 3-6 s.h.

The composition and functions of blood; diseases related to blood disorders; the role of platelets and coagulation. Manual and automated techniques of diagnostic tests for abnormalities.

MT 404: CLINICAL IMMUNOHEMATOLOGY 4-6 s.h.

Blood antigens, antibodies, crossmatching, hemolytic diseases, and related diagnostic tests. An in-depth study of blood donor service and its many facets such as transfusions, medico-legal aspects, etc.

MT 405: CLINICAL IMMUNOLOGY/SEROLOGY 2-4 s.h.

Immune response, immunoglobulins, autoimmunity and complement and related tests and diseases. Survey and demonstration of serological diagnostic tests.

MT 406: CLINICAL SEMINAR 0-4 s.h.

Other courses which are not included in the above (such as orientation, laboratory management, education, clinical microscopy) and/or are unique to the individual hospital program.

MILITARY SCIENCE

MS 101: WORLD MILITARY HISTORY 2 s.h.

A study of the relationship and impact of warfare and military forces on the social, economic, and technological development of the world as well as a study of strategy, tactics and personalities involved in major conflicts. Also, see leadership laboratory. Fall, annually.

MS 102: AMERICAN MILITARY HISTORY 2 s.h.

A study of the evolution of American military institutions, and policies from colonial troops to present. Emphasis is on the relationship between the military and other aspects of American society and the role of the military in the establishment, expansion, preservation and development of the nation. Also, see leadership laboratory. Spring, annually.

MS 203: FUNDAMENTALS OF TOPOGRAPHIC MAP INTERPRETATION 2 s.h.

The systematic study of topographic maps, their interpretation and use. Emphasis is given to understanding the grid and coordinate system, map scale, graphic representations, and terrain analysis. Fall, annually.

MS 204: NATIONAL SECURITY AND CONCEPT OF FORCE 2 s.h.

Study of national security concepts, policies and the national decision-making process with emphasis on current policies and events. Spring, annually.

MS 305: FUNDAMENTALS OF ORGANIZATION LEADERSHIP
AND MODERN LEARNING/TEACHING RELATIONSHIP 3 s.h.

Study in practical application of principles of Leadership/Management as applied in classroom and field to include case studies in psychological, physiological, and sociological factors which affect human behavior; individual and group solution of leadership problems common to organizations and small military units. Also, see leadership laboratory. Fall, annually.

MS 306: STUDY OF ADVANCED LEADERSHIP, AND THE PLANNING
AND EXECUTION OF MODERN TACTICAL OPERATIONS 3 s.h.

Analysis of leaders' role in directing and coordinating efforts of individuals and small units in execution of offensive and defensive tactical missions, to include command and control systems, the military team, and communications techniques. Also, see leadership laboratory. Spring, annually.

MS 407: MANAGEMENT OF THE MILITARY COMPLEX TO
INCLUDE FUNDAMENTALS OF MILITARY AND
INTERNATIONAL LAW 3 s.h.

Study of the various managerial elements needed to effectively control a military organization and their techniques used to accomplish these functions. Studies in military law and international law prepare the students for their legal responsibilities. Includes obligation and responsibilities of an officer.

MS 408: SEMINAR IN ANALYSIS AND MANAGEMENT 3 s.h.

Selected management problems and situations will be presented as they relate to organizations and the military.

MS 001: LEADERSHIP LABORATORY

A practical experience designed for the attainment and application of leadership principles. Concurrently scheduled in conjunction with MS 101, 102, 203, and 204, it provides for practical challenges in personal accomplishments, both physical and mental, and for development of team work and leadership. Includes mountaineering, marksmanship, self defense, water survival and orienteering.

MS 003: LEADERSHIP LABORATORY

A practical experience designed for the attainment and application of leadership

principles. Concurrently scheduled in conjunction with MS 305 and 306. It provides for practical challenges in personal accomplishment, both physical and mental, and for the development of team work and leadership.

MUSIC

MUS. 111: INTRODUCTION TO MUSIC 3 s.h.

An introductory course designed to provide a basic orientation to the enjoyment and understanding of music. Use is made of recordings, concerts, and other media. No prerequisite courses or special abilities required. Each semester.

MUS. 112: INTRO. TO AFRO-AMERICAN MUSIC 3 s.h.

An introductory course designed to provide a basic orientation to the enjoyment and understanding of Afro-American music. Use is made of recordings, filmstrips, and films. The course is non-performance. No prerequisites. Each semester.

MUS. 131: FUNDAMENTALS OF MUSIC 3 s.h.

The basic vocabulary of music fundamentals: notation, scale structures, key signatures, triads and seventh chords, rhythm and meter, harmony and its functions, intervals, sight singing and ear training, dynamics, transposition, practical application by use of a keyboard instrument, introductory study of two-and-three part forms, etc. No prerequisite. Each semester.

MUS. 133: MUSIC FUNDAMENTALS FOR ELEMENTARY TEACHERS 2 s.h.

A study of specific fundamental concepts of music both written and aural, technical and aesthetic, as preparation for the implementation of music activities to be conducted by the elementary classroom teachers. The degree and complexity of musical concentration presented is determined and guided by the practical application of knowledge assimilated as it directly relates to its use in the general classroom. No prerequisite. Elementary Education majors only. Each semester.

MUS. 134: BASIC MUSIC METHODS FOR ELEMENTARY TEACHERS 2 s.h.

A study of basic approaches for development methods and materials applicable to teaching music in the elementary grades. Emphasis is placed upon increasing keyboard and vocal skills, relevant theoretical background, and upon musical activities to be conducted by the classroom teacher. Prerequisite: Mus. 131 or 133. Each semester.

MUS. 135: THEORY OF MUSIC I 4 s.h.

Review of basic properties and notation of tone. Tonality, chord structure and texture. Functions of primary and secondary triads. Chord progressions. Melodic and harmonic cadences. Harmonization and voice leading. First and second inversion chords. Formal characteristics of melody. Embellishing tones. Introduction to harmonic, melodic and rhythmic ear training, dictation and sightsinging. For music majors or by permission. Fall, annually.

MUS. 136: THEORY OF MUSIC II 4 s.h.

Continuation of Theory of Music I. Further aspects of harmony: diatonic seventh chords, secondary dominants, mutated chords, harmonic sequence. Further discussion of melodic and harmonic cadences. Modulation and mutation. Introduction to binary and ternary forms. Further development of ear training, dictation, and sightsinging. For music majors or by permission. Prerequisite: Mus. 135. Spring, annually.

MUS. 151:	HISTORY AND LITERATURE OF MUSIC I ANTIQUITY TO 1600	3 s.h.
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Music before the Middle Ages: Greece, Rome, Byzantium, Medieval music: Gregorian Chant, secular forms. Early polyphony; music of the 13th century Ars Nova in France and Italy. English and Burgundian schools: Burgundian Chanson, motet. Mass. Renaissance music: social conditions; Netherlands Chanson, motet, Mass; Venetian, French, German, Spanish, and English music of the Renaissance. The Late Renaissance: Lutheran, Chorale, Psalter, Anglican Church music; Palestrina, Victoria, Di Lasso, Byrd. English keyboard music; Gabrieli and instrumental music. For music majors or by permission. Fall, annually.

MUS. 152:	HISTORY AND LITERATURE OF MUSIC II BAROQUE AND CLASSICAL 1600-1800	3 s.h.
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Comparison of Renaissance and Baroque music; Early Baroque in Italy; Early and Middle Baroque in Northern countries; Middle Baroque in Italy; French music under absolutism; English music during Commonwealth and Restoration; Late Baroque in Italy and France; fusion and co-ordination of national styles; social conditions; Rococo; the Viennese Classic period; style and form of Viennese classic music: Haydn, Mozart. For Music majors, or by permission. Prerequisite: Music 151. Spring, annually.

MUSICAL ORGANIZATIONS: MUS. 150-195 may be taken for one credit or for no credit. No more than one such course for credit may be taken each semester. Credits thus earned may not be counted among the Humanities in General Education but may be counted under Personal Development and Life Skills and under Free Electives, with no more than eight of these credits counted for graduation.

MUS. 150:	LYRIC THEATER WORKSHOP	0-1 s.h.
MUS. 153:	CONCERT CHOIR	0-1 s.h.
MUS. 154:	MADRIGAL SINGERS	0-1 s.h.
MUS. 155:	SYMPHONY ORCHESTRA	0-1 s.h.
MUS. 156:	SYMPHONIC BAND	0-1 s.h.
MUS. 157:	MARCHING BAND	0-1 s.h.
MUS. 159:	LABORATORY JAZZ BAND	0-1 s.h.
MUS. 190:	BRASS CHOIR	0-1 s.h.
MUS. 191:	BRASS ENSEMBLE	0-1 s.h.
MUS. 192:	PERCUSSION ENSEMBLE	0-1 s.h.
MUS. 193:	STRING ENSEMBLE	0-1 s.h.
MUS. 195:	WOODWIND ENSEMBLE	0-1 s.h.
MUS. 160:	PIANO CLASS I	1 s.h.

Designed to service two categories of students: the non-piano music education major and the non-music major. The purpose for both is the same: teaching piano to beginners in such a manner that they attain an acceptable degree of elementary technical proficiency at the keyboard, a basic knowledge of fundamental scales and chords and a burgeoning comprehension of the existence and desirability of musicianship. Stress is placed on the development of

basic keyboard skills and upon a musical performance at all levels of performance. Prerequisite: Music 131 or equivalent background. Each semester.

MUS. 161: PIANO CLASS II 1 s.h.

This course is designed to help the student to develop the ability to perform the skills begun in Piano Class I, at a more advanced level. Prerequisite: Music 160, Piano Class I, or permission of instructor. Each semester.

MUS. 162: VOICE CLASS I 1 s.h.

Designed to give the student an approach to vocal methods in order to eliminate problems. The purpose is to teach each student to treat his voice as an instrument. Class instruction is offered in voice for the non-voice major. Emphasis is placed on the development of the voice instrument and an attitude of artistic maturity on the part of the students, and upon artistic performance at all levels of proficiency. Prerequisite: Music 131 or equivalent background. Each semester.

MUS. 163: VOICE CLASS II 1 s.h.

A continuation of Voice Class I. It is designed to provide more advanced techniques for producing a free, artistic sound. A survey of various vocal styles from music-historical repertoire will be provided. Prerequisite: Voice Class I or permission of instructor. Each semester.

APPLIED MUSIC

Individual instruction in voice, piano, strings, woodwinds, and brass. Stress is placed on the development of an attitude of artistic maturity on the part of the student, and upon artistic performance at all levels of proficiency. Admission by audition and permission of instructor and department chairman. Admission of non-majors is dependent upon availability of staff. Prerequisite: Mus. 131 or equivalent background. Course numbers are listed below.

MUS. 164: VIOLIN, VIOLA 1 s.h.

MUS. 165: CELLO, STRING BASS 1 s.h.

MUS. 166: FLUTE, OBOE, SAXOPHONE 1 s.h.

MUS. 167: CLARINET, BASSOON 1 s.h.

MUS. 168: TRUMPET, FRENCH HORN 1 s.h.

MUS. 169: TROMBONE, BARITONE HORN, TUBA 1 s.h.

MUS. 170: PERCUSSION 1 s.h.

MUS. 171: PIANO 1 s.h.

MUS. 172: VOICE 1 s.h.

MUS. 173: ORGAN 1 s.h.

Offered each semester

MUS. 264: VIOLIN, VIOLA 4 s.h.

MUS. 265: CELLO, STRING BASS 4 s.h.

MUS. 266:	FLUTE, OBOE, SAXOPHONE	4 s.h.
MUS. 267:	CLARINET, BASSOON	4 s.h.
MUS. 268:	TRUMPET, FRENCH HORN	4 s.h.
MUS. 269:	TROMBONE, BARITONE HORN, TUBA	4 s.h.
MUS. 270:	PERCUSSION	4 s.h.
MUS. 271:	PIANO	4 s.h.
MUS. 272:	VOICE	4 s.h.
MUS. 273:	ORGAN	4 s.h.
	Offered each semester	

MUS. 232:	KEYBOARD SKILLS FOR ELEMENTARY TEACHERS	3 s.h.
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Various styles of accompaniment for role playing or sight reading of classroom and community songs. Emphasis upon the development of technical skills, reading facility, and memorization. Prerequisite: Mus. 131 or equivalent background. Each semester.

MUS. 233:	SONG LITERATURE FOR ELEMENTARY TEACHERS	3 s.h.
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A further study of the materials used in music education in the elementary school, including a review of the song material available in various music series textbooks and vocal command of this material. Emphasis will be on the criteria for choosing song material to illustrate various musical concepts, along with guidelines for music curriculum development. Prerequisites: Mus. 131 and 132. Spring, every other year.

MUS. 235:	THEORY OF MUSIC III	4 s.h.
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Continuation of Theory II. Further aspects of harmony; ninth, eleventh, thirteenth, embellishing diminished, Neapolitan, and augmented sixth chords. Aspects of tonal structure and form. Thematic development in two-voice counterpoint. The rondo and sonata-allegro forms. Advanced ear training, dictation, and sightsinging. For music majors or by permission. Prerequisite: Mus. 136. Fall, annually.

MUS. 236:	THEORY OF MUSIC IV	4 s.h.
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Continuation of Theory III. Investigation of enriched tonal resources through chromaticism, modality, and modulation. Melodic, harmonic, formal, and contrapuntal processes and analytical techniques in twentieth century music. Discussion of the fugue and the variation forms. Advanced ear training, dictation, and sightsinging. For music majors or by permission. Prerequisite: Mus. 235. Spring, annually.

MUS. 249:	HISTORY OF AFRO-AMERICAN MUSIC	3 s.h.
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A study of Afro-American music in the United States from its point of origin in African cultures through the development of slave music, blues, ragtime, and jazz. An in-depth and analytical study of the styles and techniques employed in various idioms of Afro-American music with regard to vocal and instrumental usage of melody, harmony, and rhythm. Prerequisite: 1 semester of music theory (Mus. 131, or Mus. 135) or some equivalent background, or permission of the instructor. On demand.

MUS. 251:	HISTORY AND LITERATURE OF MUSIC III BEETHOVEN, AND THE ROMANTIC PERIOD: 1800-1890	3 s.h.
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Beethoven: life and character; Beethoven's music. Romanticism: historical perspective; social conditions; painting and literature. Vocal music; instrumental music; opera and music drama. The national schools: Russia; Bohemia; Scandinavia; France; England; Spain; American music. For Music majors, or by permission. Fall, annually.

MUS. 252:	HISTORY OF LITERATURE OF MUSIC IV, CONTEMPORARY MUSIC: 1890 TO THE PRESENT	3 s.h.
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The late romantics; impressionism; Stravinsky; Bartok; Hindemith; neoclassicists; nationalists; Soviet realism; neo-romantics; 12-tone composers; expressionism serial; music. Schoenberg; Berg; Webern, etc.; experimentalists, electronic music; Stockhausen, Boulez, etc. American music from the late 19th century to the present. For Music majors, or by permission. Spring, annually.

MUS. 260:	VOCAL PEDAGOGY	1 s.h.
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Systematic study of the physical nature and function of the vocal instrument and breathing process and how they relate to the fundamental principles of teaching vocal technique. Application of this knowledge to the principles of vocal production and technique through lectures, demonstration and discussion, as well as group participation in instructing each other. Prerequisite: Minimum of 4 semesters of Voice or Voice Class I and II, or permission of instructor. Spring, biennially.

INSTRUMENTAL TECHNIQUES

This sequence of courses is designed to acquaint the music major with a basic knowledge of the instruments commonly used in bands and orchestras. Sufficient techniques must be developed by each student to enable him to introduce these instruments successfully to beginners in elementary to secondary school instrumental programs. Includes proper methods of tone production, fingerings, bowing techniques, embouchure and breath control, selection and purchase of instruments for school use, care and maintenance of instruments, selection, care, and adjustment of reeds or strings, storage of instruments, methods used in instruction of the instrument, and historical aspects of each family of instruments. For music majors or by permission.

MUS. 280:	INSTRUMENTAL TECHNIQUES I: VIOLIN, VIOLA	1 s.h.
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MUS. 281:	INSTRUMENTAL TECHNIQUES II: CELLO, STRING BASS	1 s.h.
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MUS. 282:	INSTRUMENTAL TECHNIQUES III: FLUTE, OBOE, SAXOPHONE	1 s.h.
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MUS. 283:	INSTRUMENTAL TECHNIQUES IV: CLARINET, BASSOON	1 s.h.
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MUS. 284:	INSTRUMENTAL TECHNIQUES V: TRUMPET, FRENCH HORN	1 s.h.
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MUS. 285:	INSTRUMENTAL TECHNIQUES IV: TROMBONE, BARITONE HORN, TUBA	1 s.h.
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MUS. 286:	INSTRUMENTAL TECHNIQUES VII: PERCUSSION Each semester.	1 s.h.
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MUS 333:	ELEMENTARY MUSIC METHODS	3 s.h.
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The role of music in elementary school; the roles of classroom teachers, the music

specialists, and the consultant. Plans, attitudes, and problems in teaching vocal and instrumental music; curriculum development. Evaluation of musical experience and growth in primary, intermediate, and upper elementary grades. Music reading as an integral part of the total music program. Musical growth and experience in singing, part-singing, listening, instrumental and rhythmic activities. Emphasis on development of ability to use the voice effectively in teaching, and on the thorough familiarity with music series texts, use of keyboard, rhythmic instruments, recordings and new developments in teaching aids. Introduction to the Orff and Kodaly methods. Supervised teaching experience. For music majors only. Prerequisites: Mus. 135, 136. Fall, annually.

MUS. 334: JUNIOR HIGH AND SECONDARY MUSIC METHODS 3 s.h.

A critical study of the entire intermediate and secondary school music program; academic, vocal, and instrumental. Curriculum planning, motivation, evaluation, selection of materials and texts, audio and visual aids, and effective teaching methods for the general music course and for elective courses in theory, history, and appreciation of music. Particular attention is given to the organization and development of both large and small vocal and instrumental groups; recruitment; selection of repertoire; performance levels; music rehearsal rooms and facilities; public performance and public relations. For music majors only. Prerequisites: Music 135, 136. Spring, annually.

MUS. 349: ART SONG LITERATURE I 2 s.h.

Representative song repertoire of the German lied and the English language art song will be studied from a performance and a historical perspective. The songs of Schubert, Schumann, Brahms, Wolf, Strauss, Britten and Rorem will be stressed. Prerequisite: Music 251, 252 or permission of the instructor.

MUS. 350: ART SONG LITERATURE II 2 s.h.

Representative song repertoire of French, Italian, Slavic and Russian composers will be studied from a performance and a historical perspective. The songs of Faure, Debussy, Ravel, Poulenc and Moussorgsky will be stressed. Prerequisite: Music 251, 252 or permission of the instructor.

MUS. 351: KEYBOARD LITERATURE 3 s.h.

A comprehensive survey of keyboard music from the Renaissance to the present. Representative works from each period are selected for careful study and analysis, with emphasis on performance practices as well as formal and stylistic elements in the music. Includes the development of various keyboard instruments. Prerequisites: Mus. 251, 252, or permission of instructor. Offered when faculty available.

MUS. 352: SYMPHONIC LITERATURE 3 s.h.

An intensive study of orchestral music from the Baroque period to the present, using scores, live performances, and recordings with particular reference to performance practices and stylistic analysis. Prerequisites: Mus. 251, 252 or permission of instructor. Offered when faculty available.

MUS. 353: CHAMBER MUSIC LITERATURE 3 s.h.

An intensive study of music written for small ensembles from the Renaissance period to the present. Representative works from each period will be selected for careful investigation and analysis. Performance by members of the class or by faculty groups will be used whenever possible. Prerequisites: Mus. 251, 252, or permission of instructor. Offered when faculty available.

MUS.355: OPERATIC LITERATURE 3 s.h.

A comprehensive survey of the entire field of operatic music from 1600 to the present, including 17th century Baroque opera; 18th century operatic reforms (Gluck and Mozart); opera in the 19th century (Verdi, Wagner, Strauss, and Puccini); 20th century trends in opera (Stravinsky, Berg, Britten, Menotti, etc.) Prerequisites: Mus. 251, 252, or permission of instructor. Offered when faculty available.

MUS. 356: CHORAL LITERATURE 3 s.h.

A comprehensive survey of choral music from the fifteenth century to the present with emphasis on masses, motets, and madrigals of the Renaissance period; oratorios, cantatas, and passions of the Baroque period; major choral works of Haydn, Mozart, Beethoven, Berlioz, Mendelssohn, Verdi, and Brahms; choral works of the twentieth century. Prerequisites: Mus. 251, 252, or permission of the instructor. Offered when faculty available.

MUS. 357: BAND LITERATURE 3 s.h.

A comprehensive survey of the available published and recorded literature for marching, military, and concert bands, symphonic and wind ensembles, and woodwind and brass chamber ensembles including transcriptions and arrangements; major publishers in the field; evaluation of various editions; and also a study of the principal trends of instrumental pedagogy, repertoire, and performance. Prerequisites: Mus. 131, 132. Offered when faculty available.

MUS. 361: PIANO TEACHING METHODS & MATERIALS 3 s.h.

A comprehensive survey of modern piano teaching methods and available published teaching materials. Emphasis will be placed on the teaching of notation and the development of reading skills; the teaching of keyboard techniques through an understanding of the player's physical mechanism and the coordination of timing and touch; problems of fingering, pedaling, and memorization. Evaluation of materials for beginning students; easier teaching pieces by the great composers; anthologies; appropriate music for the intermediate student, leading to a more advanced technique and musicianship and to acquaintance with a wide range of composers and musical styles. Prerequisites: Mus. 151, 152; or Mus. 131 and permission of the instructor. Offered when faculty available.

MUS. 362: INSTRUMENTAL METHODS 2 s.h.

Principles and procedures of organizing and conducting instrumental classes, bands, and orchestras in the public schools. Examination and use of texts, methods, and other materials. For music majors or by permission. Spring, annually.

MUS. 363: VOCAL METHODS 2 s.h.

Principles and procedures of organizing and conducting vocal classes and choral ensembles in the public schools. Vocal techniques, tone production, proper vowel placement, proper focus on tone, diction, diaphragmatic breathing, and investigation of choral literature. For music majors or by permission. Fall, annually.

MUS. 364: COMPOSITION 3 s.h.

A study of the nature of the musical idea and of the various possibilities of its subsequent development, including canonic or fugal treatment, motivic development, and variational procedures. A review of traditional structural plans and of contemporary formal and stylistic trends. Creative assignments emphasize the understanding of past and present compositional styles and techniques and the gradual development of a personal language. Prerequisites: Mus. 135, 136, or permission of instructor. Offered when faculty available.

MUS. 365: CONDUCTING I 2 s.h.

Designed to develop skilled baton techniques and clarity of gesture, effective rehearsal techniques, understanding of performance problems involving tonal balance, tempo, complex rhythmic situations, especially as related to intermediate and secondary school instrumental groups. Traditional and modern beat patterns; expressive gestures; cues and development of left hand; fermata; etc. Study of scores; problems of interpretation and rehearsal; performance preparation. For music majors or by permission. Fall, annually.

MUS. 366: CONDUCTING II 2 s.h.

Continuation of Conducting I with emphasis on mastery of technique; special emphasis on problems of vocal groups in junior and senior high school. Spring, annually.

MUS. 367: ORCHESTRATION 2 s.h.

Basic principles of clear instrumental organization and tonal interest, related to the size of the instrumental group. Ranges and registers of the instruments; transposition; bowing and phrasing; phrasing for woodwind instruments; possibilities and limitations. Texture, timbre, dynamics, principles of tonal interest; contract of timbre; instrumental motion; blend. Structural values; design, overlapping of choirs. Prerequisites: Theory of Music I and II, Instrumental Techniques (minimum of one credit in each family of instruments). Each semester.

MUS. 368: BAND ARRANGING 3 s.h.

A study of instrumentation and scoring problems in marching, military, and concert bands, symphonic wind ensembles, and woodwind and brass chamber ensembles. Emphasis on score layout and notation, copying and multiple reproduction of parts, copyright implications, and knowledge of effective combination of instrumental sounds. Prerequisites: Mus. 131 (or equivalent background) and consent of instructor. Offered when faculty available.

MUS. 369: MARCHING BAND TECHNIQUES AND MATERIALS 2 s.h.

A detailed study of the marching band including organization, music, materials, care of instruments and uniforms, marching essentials, administration, and contemporary techniques. Prerequisites: Mus. 135, 136 or permission of the instructor. Fall, annually.

MUS. 411: SPECIAL TOPICS IN MUSIC 3 s.h.

Topics of special interest in the field of music will be offered. Subject areas such as Orff — Music for Children; Kodaly method; Mozart, the Man and his Music will be studied. Topics will be announced in advance. Offered occasionally.

MUS. 431-531: MUSIC IN EARLY CHILDHOOD 3 s.h.

The study of music activities for the early childhood years (ages 2-8) and methods for implementing these activities. Topics include: a study of the development of the child voice; singing activities and criteria for song selection; music concept development through listening discrimination, expressive movement and creative instrumental activities; introductory music reading activities; an overview of current trends in music education. Prerequisites: Mus. 131 and 132. Fall, annually.

MUS. 451: ADVANCED CONDUCTING 3 s.h.

A study of selected works by band, choral, and orchestral literature with particular reference of performance problems involving tonal balance, tempi, complex rhythmic and poly-metric situations, vocal intonations, and diction. Conducting experience with band, choir and/or madrigal singers, and orchestra in rehearsal. Emphasis on a thorough understanding of the musical score and on effective rehearsal techniques. Prerequisites: Mus. 365, 366, or permission of instructor. Offered when faculty available.

MUS. 452:	WESTERN MUSIC AND ITS RELATIONSHIP TO FINE ARTS	3 s.h.
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This course will consist of a comparative study of Western music in its stylistic relationship to the Fine Arts from the middle ages through the twentieth century. In addition it aims to show how the various arts responded to each other in the pattern of cultural history. No prerequisite courses are required, but a rudimentary background in music or art is desirable. Offered when faculty available.

MUS. 453:	MELODIC IMPROVISATION	2 s.h.
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The course is designed to provide the advanced music student with fundamental concepts of improvisational techniques which may be applied to the development of skills for the invention and performance of improvised melodies. Prerequisite: Mus. 135, 136, 235, 236, or equivalent theoretical background. Offered when faculty available.

ADVANCED INSTRUMENTAL TECHNIQUES AND PEDAGOGY

MUS. 464.	ADVANCED PERCUSSION TECHNIQUES AND PEDAGOGY	2 s.h.
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The sequence of courses listed below constitutes further study of the symphonic instruments. Specialized techniques which are employed by each instrumental family will be presented and mastered (strings, woodwinds, brasses, percussion). Sufficient techniques will be developed by the student to enable him to introduce and teach these instruments successfully at the elementary or secondary level. The course will include methods, materials, manufacturers, suppliers, repairmen, and procedures for private, homogeneous and heterogeneous group instruction; studio teaching and management; musicianship and creativity as part of the lesson; planning for various grade levels; history of teaching and study of leading methods.

MUS. 461.	ADVANCED STRING TECHNIQUES AND PEDAGOGY	2 s.h.
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Prerequisites: Mus. 281 or 282, or permission of instructor.

MUS. 462:	ADVANCED WOODWIND TECHNIQUES AND PEDAGOGY	2 s.h.
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Prerequisites: Mus. 282 or 283, or permission of instructor.

MUS. 463.	ADVANCED BRASS TECHNIQUES AND PEDAGOGY	2 s.h.
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Prerequisites: Mus. 284 or 285, or permission of instructor.

MUS. 490:	INDEPENDENT STUDY	1-3 s.h.
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Opportunity to explore, in depth, an area of music of particular interest under the guidance of a faculty member. A scholarly paper or special project(s) will be required for credit and grade. Prerequisite: Permission of the instructor and department chairman.

NURSING

ASSOCIATE DEGREE

NURS. 101:	INTRODUCTION TO NURSING PROCESS: FUNDAMENTALS OF NURSING	8 s.h.
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This course introduces the student to Nursing, Man and Health, which are fundamental concepts to the Nursing Process. Emphasis is placed on man's basic needs according to his

established priorities and the related nursing interventions. Clinical experience is provided for the student to develop beginning competencies in those technical skills necessary to carry out the prescribed nursing care plan and medical regimen. Four lecture and twelve laboratory or clinical experience hours weekly. Fall, annually.

NURS. 102: NURSING PROCESS I: PARENTAL AND CHILD HEALTH 4 s.h.

This course introduces the student to the family unit during the normal maternal cycle and development of the infant through the first year. Opportunities are provided for the student to work with families during the antepartal, intrapartal and postpartal health experience. Alterations in the normal health situation are also presented with a focus on adapting nursing care to meet the individual needs of the client and family. Two lectures and six clinical experience hours weekly. Prerequisites: Biol. 258, Psych. 211, and minimum grade of C in Nursing 101. Spring, annually.

NURS. 103: NURSING PROCESS II 4 s.h.

This course is an introduction to the nursing process as the basis for the practice of nursing. Opportunities are provided for the student to develop expertise in the following components of the nursing process: assessment, planning, implementation and evaluation. Each aspect of the nursing process is applied to the care of the client and family during activities of daily living. Two lecture and six clinical experience hours weekly. Prerequisites: Biol. 258, Psy. 211, minimum grade of C in Nurs. 101. Spring, annually.

NURS. 201: NURSING PROCESS III 8 s.h.

This course provides the student with an in-depth knowledge of the nursing process. Nursing diagnoses are utilized as the basis for assisting the client and his/her family during periods of stress and illness. The primary focus is upon establishing priorities for client needs relating to life crises, oxygen exchange, oxygen transport and comfort; and mobilizing resources of the client and family in the decision making process. Opportunities are provided for the student to develop competencies in technical and community skills necessary to carry out the prescribed nursing care plan and medical regimen. Four lectures and twelve clinical experience hours weekly. Prerequisites: Biol. 251 and 258; Psych. 211 and 260; minimum grade of C in Nursing 101, 102, and 103. Fall, annually.

NURS. 202: NURSING PROCESS IV 8 s.h.

Nursing Process IV is a logical extension of Nursing Process III and continues to increase the student's knowledge and understanding of the nursing process. The nursing diagnosis is basis for assisting the client and family in establishing health goals related to mobility structure, mobility function, regulatory safety nutrition, elimination, and protective safety. This course provides additional opportunities for the student to develop expertise in specific technical and communication skills while working as a member of the health team in acute care settings. Four lecture and twelve clinical experience hours weekly. Prerequisites: Biol. 258, 259, 260; Psych. 211 and 260; minimum grade of C in Nursing 101, 102, 103, and 201. Spring, annually.

NURS. 203: NURSING SEMINAR 2 s.h.

This course is designed to introduce the student to the relevant aspects of change in the nursing profession, ranging from historical development to current issues and trends. Opportunities are provided for the student to participate in in-depth studies of selected topics of interest. Special emphasis is placed on preparing the individual for the transition from the role of student to that of graduate nurse. Prerequisites: minimum grade of C in Nursing 101, 102, 103, and 201. Spring, annually.

BACCALAUREATE DEGREE

NURS. 340. MAN-HEALTH-NURSING 3 s.h.

Nursing is introduced to the student as an independent and interdependent profession, providing care for individuals, families and communities desiring assistance with health maintenance. This course emphasizes man, as a unified whole, and his rights as a consumer in the health care system. It also focuses on the dynamics of stress and its relationship to the health-illness continuum. Nursing theories are discussed as the base for the practice of professional nursing. This course may be taken concurrent with Leadership Skills in Nursing and Nursing Process, but it is required as a prerequisite to all other nursing courses.

NURS. 357: LEADERSHIP SKILLS IN NURSING 3 s.h.

This course provides a theoretical foundation for the practice of independent and interdependent nursing. The principles of leadership application to professional nursing is emphasized. The major focus will be on the concepts of change, group process, management, organization and evaluation. This course may be taken concurrently with Man-Health-Nursing and Nursing Process, but it is required as a prerequisite to all other nursing courses.

NURS. 361 ADVANCED NURSING PROCESS 6 s.h.

This course includes a detailed study of the nursing process emphasizing the role of nursing diagnosis in professional nursing practice. Each aspect of the nursing process is related to the specific needs of the client and family requiring nursing intervention throughout their life process. Opportunities are provided for the student to develop expertise in assessment, planning, implementation and evaluation in a variety of settings. This course may be taken concurrently with Leadership Skills in Nursing and Nursing Process, but it is required as a prerequisite to all other nursing courses.

NURS. 445: INQUIRY IN NURSING 2 s.h.

This course emphasizes the role of inquiry as it applies to nursing. It includes principles of research and scientific method of inquiry. This course focuses on the ways that research influences nursing and nursing care. Current research will be critiqued for applicability to professional nursing practice in a variety of settings.

NURS. 462: ADVANCED NURSING PROCESS: ACUTE CARE 6 s.h.

The conceptual focus of this course is the nursing process. Nursing diagnoses relating to acute stress are explored in depth, and are utilized in providing quality nursing care. Professional nursing interventions are identified which facilitate the client's adaptation to acute stress. Opportunities are provided for the student, as the client advocate, to apply the acquired theoretical knowledge to the care of clients of all ages in a variety of settings.

NURS. 463. ADVANCED NURSING PROCESS: CHRONIC CARE 6 s.h.

The conceptual focus of this course is the nursing process. Nursing diagnoses relating to chronic stress are explored to depth, and are utilized in providing quality nursing care. Professional nursing interventions are identified which facilitate the client's adaptation to chronic stress. Opportunities are provided for the student, as the client advocate, to apply the theoretical knowledge to the care of clients of all ages in a variety of settings.

NURS. 464: ADVANCED NURSING PROCESS: HEALTH PROMOTION
AND MAINTENANCE 6 s.h.

The conceptual focus of this course is the nursing process. Potential health problems are studied, and nursing interventions aimed at prevention are explored in depth. The nursing process is utilized to assess man's level of wellness and to provide professional nursing care.

directed toward health promotion and maintenance. Opportunities are provided for the student, as the client advocate, to apply the acquired theoretical knowledge to the care of the clients of all ages in a variety of settings.

OTHER NURSING COURSES

NURS. 299: SPECIAL TOPICS IN NURSING 1-3 credits variable

This course deals with topics of special interest for all registered nurses. It will focus on identified nursing subjects needed by the registered nurse to keep abreast of the changing trends in the profession; and provide them with a mechanism for updating their nursing knowledge and clinical competencies. This program will be offered summers and weekends during the academic year according to demand, and will be open to all graduate and registered nurses.

NURS. 490: PHYSICAL ASSESSMENT 3 credits

This course is designed for registered nurses who desire knowledge and skill in assessing the health of a client through a health history and physical examination. The focus is on wellness with emphasis on early detection of changes in the health status of the client. Opportunities are provided for the student to develop expertise in obtaining a health history and performing a physical assessment in a detailed and systematic manner. This course will be offered according to demand and will be open to all registered nurses.

NURS. 499: SPECIAL TOPICS IN NURSING 1-3 credits variable

This course deals with topics of special interest to professional nurses. It will focus on identified nursing subjects pertinent to the practice of professional nursing. This course will be offered summers and weekends during the academic year according to demand, and will be open to all professional registered nurses.

PHILOSOPHY

PHIL. 111: ELEMENTARY LOGIC 3 s.h.

Principles of correct reasoning; principles of deductive and inductive inference and scientific method; use and misuse of language in reasoning. Each semester.

PHIL. 112: SYMBOLIC LOGIC 3 s.h.

A study of the essential elements of symbolic logic including Boolean expansions, truth tables (symbolic proofs), the logic of relation, quantification rules, the properties of deductive systems, and propositional calculus. Special attention is given to the theoretical contributions of Carnap, Quine, Russell. Spring, 1985, 1987, and alternate years.

PHIL. 211: INTRODUCTION TO PHILOSOPHY 3 s.h.

Inquiry into the persistent problems of philosophy, primarily those concerning man, nature and God. Prerequisite: sophomore standing. Each semester.

PHIL. 212: ETHICS 3 s.h.

Examination of the problems of value and moral standards with a view toward developing an appreciation of the nature of the moral life. Each semester.

- PHIL. 215: MAJOR RELIGIOUS PHILOSOPHIES 3 s.h.
- Examination of the religious philosophies which have their origins in the Far and Near East, in particular Hinduism, Buddhism, Confucianism, Taoism, Judaism, Christianity, and Islam. Spring, 1985, 1987, and alternate years.
- PHIL. 250: SPECIAL TOPICS IN PHILOSOPHY
- Offered occasionally.
- PHIL. 255: ANCIENT PHILOSOPHY 3 s.h.
- Thinkers from the Ancient Greeks up to the Renaissance, with special attention to Plato, Aristotle, Augustine, and Aquinas. Fall, 1983, and alternate years.
- PHIL. 256: MODERN PHILOSOPHY 3 s.h.
- Thinkers from the Renaissance to the 19th Century, with special attention to Descartes, Spinoza, Hume, Kant, and Hegel. Prerequisite: Philosophy 255 is recommended. Spring, 1985, and alternate years.
- PHIL. 258: CONTEMPORARY EUROPEAN PHILOSOPHY 3 s.h.
- A study of European men and movements since 1850. Spring 1985, and alternate years.
- PHIL. 259: CONTEMPORARY ANGLO-AMERICAN PHILOSOPHY 3 s.h.
- A study of Anglo-American men and movements since 1900. Spring, 1984, and alternate years.
- PHIL. 350: PHILOSOPHY OF RELIGION 3 s.h.
- Inquiry into the nature and validity of religious knowledge; the nature and existence of God, the nature of man and human destiny. Fall 1984, and alternate years.
- PHIL. 352: EPISTEMOLOGY 3 s.h.
- Concepts and problems involved in the appraisal of certain types of human knowledge: perception, knowledge and belief, and truth. On demand.
- PHIL. 353: METAPHYSICS 3 s.h.
- Inquiry into some of the fundamental philosophical concepts; being, substance, matter, mind, and God. Prerequisite: 6 credit hours in Philosophy. On demand.
- PHIL. 354: AESTHETICS 3 s.h.
- Study of some of the aesthetic theories from Plato to the present; nature of the aesthetic experience; principles of criticism in literature and the arts. Fall, annually.
- PHIL. 355: HISTORY AND PHILOSOPHY OF SCIENCE 3 s.h.
- Methods and procedures of reliable knowledge in the formal, natural, and social sciences. Prerequisite: Philosophy 111 is recommended. Fall, annually.
- PHIL. 356: ORIENTAL PHILOSOPHY 3 s.h.
- Significant contribution to philosophical and religious thought in the Near East, India, China, and Japan. Fall, 1983, and alternate years.

PHYSICS

PHY. SCI. 112: BASIC PHYSICAL SCIENCE: PHYSICS AND ASTRONOMY 3 s.h.

This course is intended for those students not majoring in the sciences or mathematics, and does not presume any prior familiarity with the subject. Topics discussed are descriptive astronomy, cosmology, light and optics, force and motion, fundamental and electrical phenomena and simple circuits, the special theory of relativity, and radioactivity and the atom. Brief experiments are integrated with the subject matter to emphasize the experimental basis of theory. The Planetarium is extensively used in conjunction with the sections of astronomy. No prerequisites. Each semester.

PHY. 251: GENERAL PHYSICS I 4 s.h.

This is a general course in mechanics, heat, and sound. Topics studied include the mechanics of solid, liquids, gasses, thermometry, calorimetry, heat transferances, and the production and nature of sound waves including musical sound. Designed for non-physics majors. Includes laboratory. Prerequisite: Algebra. Each fall.

PHY. 252: GENERAL PHYSICS II 4 s.h.

This is a continuation of Phy. 251, a general course in electricity, magnetism, light, and atomic physics. Topics discussed include general concepts of magnetism, electrostatics, electrical circuits, alternating currents, optical instruments, reflection, refraction, interference, spectra, and some basic concepts of atomic structure. Designed for non-physics majors. Includes laboratory. Prerequisites: Algebra. Each spring.

PHY. 258: INTRODUCTORY PHYSICS LECTURE I 4 s.h.

This is an introductory physics course designed for physics majors and pre-engineers. The course includes mechanics, heat, and sound. Phy. 268 must be taken concurrently by physics majors and prospective engineers. Prerequisite: Math. 171, which may be taken concurrently. Each fall.

PHY. 268: INTRODUCTORY PHYSICS LABORATORY I 1 s.h.

This laboratory complements Phy. 258, and should not be scheduled by students who are not also enrolled in Phy. 258. Experiments performed in this laboratory include free-fall, momentum and energy, and wave phenomena. Also included is the technique of writing the formal scientific report. Each fall.

PHY. 259: INTRODUCTORY PHYSICS LECTURE II 4 s.h.

A continuation of Phy. 258, an introductory course in physics designed for physics majors and pre-engineers. This course includes electricity, magnetism, light and atomic physics. Phy. 269 must be scheduled concurrently with Phy. 259 by physics majors and pre-engineers. Prerequisite: Phy. 258. Each spring.

PHY. 269: INTRODUCTORY PHYSICS LABORATORY II 1 s.h.

This laboratory complements Phy. 259, and should not be scheduled by students who are not also enrolled in Phy. 259. Experiments performed in this laboratory include current, potential, resistance and impedance measurements, use of the oscilloscope, image formation by lenses and mirrors, diffraction gratings, lasers, Geiger-Muller detectors, and the measurement of radioactive half-life. Each spring.

PHY. 350: MECHANICS — STATICS 3 s.h.

An intermediate course in the mechanics of static objects. Topics include: equilibrium, virtual displacements, moments of inertia, friction and flexible cables. Prerequisites: Phy. 251 or 258, and Math. 271. Each fall.

PHY. 351:	MECHANICS: DYNAMICS	3 s.h.
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This is an intermediate course in the mechanics of solids, liquids and gasses. Studies are made of rectilinear and curvilinear motion, work and energy, impulse and momentum, and oscillatory motion. Prerequisites: Phy. 252 or 259; Math. 350. Each spring.

PHY. 352: ELECTRICITY AND MAGNETISM 3 s.h.

An intermediate course in electricity and magnetism. Vector analysis techniques are used for studying various areas of electrostatics and considerable emphasis is placed on A.C. circuit theory. Maxwell's equations for the electromagnetic field are derived. Prerequisites: Phy. 252 or 259; Math 350. Fall, 1984, 1986.

PHY. 353: MODERN PHYSICS I 3 s.h.

An intermediate course on the electronic structure of the atom, including Bohr theory, Quantum Theory, and Vector Model. Optical and X-ray spectra, the Special Theory of Relativity, and the Uncertainty Principle are among the topics studied. Prerequisites: Phy. 252 or 259; Math. 172 with Math. 271 concurrently. Fall, 1984, 1986.

PHY. 354: OPTICS 3 s.h.

This is an intermediate course in geometrical and physical optics. Topics include thin lenses, thick lenses, interference, diffraction, polarization, color theory, and the study of spectra. Prerequisites: Phy. 252 or 259; Math. 271, with Math. 272 concurrently. Spring, 1984, 1986.

PHY. 355:	MODERN PHYSICS II	3 s.h.
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A continuation of Modern Physics I, including structure and spectra of molecules, band theory of solids, structure of the nucleus, radioactive decay, nuclear reactions, radiation detectors, and elementary particles. Prerequisites: Physics 353, Math 272. Offered spring, 1985, 1987.

PHY. 356: THERMODYNAMICS 3 s.h.

This is an intermediate course in heat. The basic concepts and principles are developed more intensively in the study of properties of gasses and in thermodynamics. Some of the specific topics studied are temperature measurements, thermal expansion, specific heat, thermal conductivity of solids and liquids, thermal properties of gasses, change in phase, and heat engines. Prerequisites: Phy. 252 or 259; Math. 272. Spring, 1984, 1986.

PHY. 357:	INTRODUCTION TO THE THEORY OF THE SOLID STATE	3 s.h.
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The course will include the study of two- and three-dimensional space groups. Miller indices, crystalline structure of various types, X-ray diffraction, lattice vibrations, Einstein and Debye theories of heat capacity of conduction electrons. Fermi-Dirac distribution law, and the transport properties of metal. Prerequisite: Phy. 353. Spring, 1985, 1987.

PHY. 370: EXPERIMENTAL PHYSICS 2 s.h.

This course complements Phys. 351, 352, 353, 354, and 355, offering a wide range of intermediate-to advanced-level experiments in Mechanics, Electricity, Optics, Atomic and Nuclear Physics. In addition to laboratory work the student will investigate background and related materials in the library journal collections and obtain practice in journalism-style report writing. The laboratory is highly individualized, each student moving at his own pace and working in those areas of Physics appropriate to his academic experience. Prerequisites: Junior-senior standing, and at least two of the following courses: Phy. 351, 352, 353, 354, 355 must be completed or co-registered. This course may be taken twice, with different experimental content, for credit. Each fall.

PHY. 453: **INDEPENDENT STUDY IN PHYSICAL MEASUREMENTS** 2 to 6 s.h.

This is a course in the theory and use of precision measuring devices covering most of the areas of Physics. Experiments are devised to fit background and needs of the individual student, exploiting the equipment from all of the various special laboratories of the Physics Department. The student will work from three to six hours each week on experimental projects, according to the credit he elects upon consultation with his advisor.

PHY. 455: **ELECTRONICS** 3 s.h.

This course includes the analysis of circuits containing passive devices; resistors, capacitors, and inductors; as well as study of active devices; vacuum tubes and transistors. The uses of these devices in communications and industry are studied. Prerequisites: Phy. 252, or 259. Fall, 1983, 1985.

PHY. 457: **DEMONSTRATION IN PHYSICS** 3 s.h.

This course is designed for the secondary education major in physics. Preparation and performance of classroom demonstrations for use in secondary schools are stressed. Prerequisites: Phy. 252 or 259. On demand.

PHY. 460: **INTRODUCTION TO MATHEMATICAL PHYSICS** 3 s.h.

This course uses the techniques of vector calculus and differential equations to treat problems in mechanics, electricity and other areas of physics at a level intended to prepare the physics major for graduate level work. Analog and digital computer techniques are discussed and applied to a variety of physical problems. Prerequisites: Physics-258, 259, Mathematics through Math. 353. Fall, 1983, 1985.

PHY. 461: **SEMINAR** 1 s.h.

This physics seminar consists of mastering the techniques of literature-survey and library research on specific topics, together with the preparation and presentation of formal reports of a research nature. Prerequisites: senior standing, science major. Spring, annually.

POLITICAL SCIENCE

P.S. 210: **INTRODUCTION TO POLITICAL SCIENCE** 3 s.h.

This course introduces students to the study of politics by using various approaches, by studying different political ideologies, and by examining different structures of government. Each semester.

P.S. 211: **AMERICAN GOVERNMENT** 3 s.h.

The study of the general principles of the American system of constitutional government; special emphasis is placed upon the organization and functions of the national government — legislative, executive, and judicial. The rights and duties of citizenship, the electorate, political parties, civil rights, and the growing regulatory function of government are carefully treated. Each semester.

P.S. 250: **SPECIAL TOPICS IN POLITICAL SCIENCE: ATHENIAN DEMOCRACY**
Offered occasionally.

P.S. 300: **STRATEGIC CONCEPTS AND INTERNATIONAL SECURITY** 3 s.h.

Strategic concepts in the 20th century as they evolved from World War I to World War II to the nuclear age. Emphasis will be placed on global nuclear strategy and regional strategic thrusts. Fall, annually.

P.S. 311: GOVERNMENT AND POLITICS OF SOUTHEAST ASIA 3 s.h.

The constitutional development and the process of political modernization in Thailand, Burma, Indonesia, Malaysia, Vietnam (North and South), Cambodia, and the Philippines. Every other year.

P.S. 351: STATE AND LOCAL GOVERNMENT 3 s.h.

Deals mainly with a detailed study of how our state and local governments function. Emphasis is placed on Pennsylvania government. Independent study through outside projects is one of the requirements of this course. Every other year.

P.S. 352: INTERNATIONAL POLITICS 3 s.h.

This course presents a framework for analyzing the behavior of states, the basic factors which motivate and affect international policies, and the techniques of resolving international conflicts. Every other year.

P.S. 353: INTERNATIONAL ORGANIZATION 3 s.h.

This course deals with international organizations, both historically and analytically. Emphasis is placed on configurations that induce state behaviors leading to resolution of international conflicts and to the solution of common problems. Every third year.

P.S. 354: CONSTITUTIONAL LAW OF THE UNITED STATES 3 s.h.

A study of the development of the Constitution through the interpretations of the Supreme Court. This includes a study of the separation of governmental powers, political and judicial processes, federalism as a legal device, and the relationship of liberty and authority to the individual living under government. Prerequisite: P.S. 211. Spring, annually.

P.S. 355: POLITICAL PARTIES AND ELECTIONS 3 s.h.

A survey course with emphasis on the study of the electorate, pressure groups, and public opinion, nature and history of political parties, party organization, methods of nominations, and elections. Special attention is given to the place of political parties and elections as instruments of democracy and their place in the framework of Pennsylvania's government. Fall, annually.

P.S. 365: ANCIENT AND MEDIEVAL POLITICAL THOUGHT 3 s.h.

The development of political theory from Plato and Machiavelli. Every year.

P.S. 366: MODERN POLITICAL THOUGHT 3 s.h.

Political thought from the Reformation to the twentieth century. Every year.

P.S. 375: PUBLIC ADMINISTRATION 3 s.h.

An introduction to the study of public administration with emphasis on its function in the American political process. Every other year.

P.S. 390: COMPARATIVE FOREIGN POLICIES 3 s.h.

Concepts for analysis of internal and external factors in making foreign policies. Emphasis will be placed on the foreign policy of the United States, the Soviet Union. The United Kingdom, France, and China. No prerequisites. Every third year.

P.S. 451: COMPARATIVE GOVERNMENT 3 s.h.

A consideration of the problem inherent in comparing political systems with emphasis on the British, French, and Soviet political systems. Every year.

A consideration of constitutional government in England from the beginning of English history to the present. The study of governmental powers, political and judicial processes, and the relationships of liberty and authority to the individual living under the government is included. Every other year.

PSYCHOLOGY

PSY. 211: GENERAL PSYCHOLOGY

3 s.h.

Study is made of the general subject matter of psychology, its methods and procedures and its major findings. Areas of particular stress include genetic inheritance, development, learning, emotions and motivation, sensation and perception, personality and abnormal adjustment, and the social behaviors of groups. Each semester.

NOTE: General Psychology is the prerequisite for all psychology courses except as indicated.

PSY. 225: PSYCHOLOGY OF ADJUSTMENT

3 s.h.

This course emphasizes the psychodynamics of "normal" social adjustment and enables each student to explore his own self-identity, his social relationships, and his interactions with his environment. Problems of personality, mechanisms of adjustment, the origin and resolution of conflicts, and the role of emotion in behavior are studied. No prerequisite. Each semester.

PSY. 228: HUMAN BEHAVIOR IN ORGANIZATIONS

3 s.h.

A survey of the application of psychological theory, techniques, and research to organizations. The psychological principles of selection, training, attitudes, motivation, job satisfaction, job evaluation, and performance are analyzed. No prerequisite. Offered only at Venango Campus.

PSY. 230: INTRODUCTORY STATISTICS FOR THE BEHAVIORAL SCIENCES

3 s.h.

Basic descriptive and inferential statistical techniques (frequency distributions, measures of variability and central tendency, correlation, regression, z, t and F tests) will be covered. Special attention will be given to the use of those techniques in dealing with data in the behavioral sciences and their importance in the research endeavor. No prerequisite. Each semester.

PSY. 251: EXPERIMENTAL PSYCHOLOGY

3 s.h.

This course is designed to familiarize students with the methods used by psychologists to systematically collect information about the behavior of people and lower animals. Experiments are conducted during laboratory meetings and particular attention is given to the appropriate style of writing research reports. Psych. 230 is a prerequisite; concurrent registration is only permitted with consent of the instructor. Each semester.

PSY. 260: DEVELOPMENTAL PSYCHOLOGY

3 s.h.

Study of the development of human behavior from conception through infancy, childhood, adolescence, adulthood, and old age. Special attention is given to the physical, emotional, intellectual, and social aspects of development. No prerequisites. Each semester.

PSY. 321: PSYCHOLOGY OF ADOLESCENCE 3 s.h.

The physical, intellectual psychosocial, and cultural bases of adolescent behavior are studied as these relate to peers, home, school, and community. Each semester.

PSY. 322: EDUCATIONAL PSYCHOLOGY 3 s.h.

A study of the psychological foundations of education and the application of principles and methods of psychology to problems of learning and teaching. No prerequisites. Each semester.

NOTE: Credit toward the psychology major will not be granted for this course.

PSY. 331: CHILD PSYCHOLOGY 3 s.h.

Study of the child from birth through pre-adolescence. Topics include the physical, social, emotional, and intellectual development of children, the relationship of heredity to environment, personality development, attitudes toward self and others. Each semester.

PSY. 340: PSYCHOLOGY OF WOMEN 3 s.h.

Empirical and theoretical concepts from all areas of psychology provide a base for the study of the changing role of women and the psychological effects upon the individual. Topics include sex-role development consequences, women's alternative roles, women in relation to their bodies, a social-psychological analysis of the women's movement, and mental health considerations. Fall, annually.

PSY. 350: INDUSTRIAL PSYCHOLOGY 3 s.h.

Close scrutiny is given to the complex process by which personnel are evaluated and selected for positions in business and industrial organizations and the psychological variables which affect their mental and physical performance. Among these are the effects of stress and conflict on the worker, personality differences, training procedures, intelligence and motivation, and the special problems of women and minorities. No prerequisite. Annually.

PSY. 354: ABNORMAL PSYCHOLOGY 3 s.h.

A survey is made of the principal forms of behavior disorders with emphasis on their etiology, diagnosis, prognosis, and treatment. Each semester.

PSY. 355: SOCIAL PSYCHOLOGY 3 s.h.

Study is made of the interpersonal relations of humans and how these are affected by society's norms and values. Each semester.

PSY. 356: HISTORY AND SYSTEMS OF PSYCHOLOGY 3 s.h.

The issues of concern to modern psychologists are frequently those which have been of concern to humans since the dawn of recorded history. In this course we will look at the foundations of psychological thought and its development from Greek civilization, through the reformation and to a period of quasi-maturity in the formal systems of the late 19th and early 20th centuries. Fall, annually.

PSY. 357: INTRODUCTION TO PSYCHOLOGICAL
AND EDUCATIONAL TESTING 3 s.h.

For both psychology and education majors. Covers the nature and use of tests including intelligence, personality, aptitude, interests, achievement, and classroom progress. The student will also prepare behavioral objectives, construct tests of items which sample the objectives, administer the tests, and analyze the results. Knowledge of first-year high school algebra is assumed. Fall, annually.

PSY. 360: CURRENT TOPICS 3 s.h.

This course focuses on a single, broad, contemporary issue of current interest in psychology and related fields of study. Course content varies from semester to semester. May be taken three times for credit. Once, annually.

PSY. 393: INDEPENDENT STUDY 1-3 s.h.

An opportunity for the student to explore an area of special interest in depth for variable credit under the supervision of a member of the department and with approval of the chairman. Open to juniors and seniors.

PSY. 452: PHYSIOLOGICAL PSYCHOLOGY 3 s.h.

This course is designed to survey a variety of topics of primary interest and importance to psychology from a physiological viewpoint. The basic goal of this approach is to discover the physical and biological mechanisms that underlie behavior. Topics to be covered include: drugs and behavior, perception, emotions and motivation, sleep, learning and memory, aggression, psychopathology, etc. A variety of laboratory methods and techniques are introduced via demonstrations. Open to juniors and seniors. Each semester.

PSY. 454: PERSONALITY 3 s.h.

Systematic study is made of the development, dynamics, and structure of the self-system together with a critical comparison of the major theories of personality. Spring, annually.

PSY. 455: LEARNING AND MOTIVATION 3 s.h.

A critical survey is made of the outstanding attempts to understand and explain the nature of the learning process. Emphasis is placed on a comparison of current theories and their implications when applied to forms of learning and motivation from the simple to the complex. Fall, annually.

PSY. 457: PSYCHOLOGY OF ADULT DEVELOPMENT AND AGING 3 s.h.

Study of the development of human adult behavior from early childhood through the aging processes. Special attention is given to the physical, emotional, intellectual, and social aspects of adult development and aging. Spring, annually.

PSY. 458: SENSATION AND PERCEPTION 3 s.h.

The sensory-perceptual processes will be studied with a view to understanding their structure properties and their role in the psychological functioning of man. Particular emphasis will be placed on vision and hearing and the differences within and between human individuals. Fall, even numbered years.

PSY. 459: COMPARATIVE PSYCHOLOGY 3 s.h.

A study of the underlying genetic and biological controlling mechanisms of animal and human behavior. Special emphasis given to role of evolution and natural selection in the development of behavior adaptations, and to behavioral comparisons between species. Fall, annually.

PSY. 460: BEHAVIOR THERAPY 3 s.h.

This course will introduce students to the nature of behavior therapy, its conceptual and empirical foundations and its clinical applications to a variety of symptoms and in a variety of settings. While not designed to train behavior therapists, it is intended to sensitize students to the responsiveness of human behavior to environmental change. Prerequisite: Psy. 455.

PSY. 464: INTRODUCTION TO CLINICAL PSYCHOLOGY 3 s.h.

Following an experiential-cognitive format, students will learn the basic helping skills of accurate empathy, nonjudgmental permissiveness and genuineness as applied both to dyadic and group contexts. Prerequisites: Psy. 354 and 456. Each semester.

PSY. 465: RESEARCH SEMINAR 3 s.h.

This course affords students the opportunity to continue the study of research techniques. Each student, with the approval of the instructor, will undertake a research project in the area of his choice. The work will culminate in a paper of distinguished quality. Prerequisites: Psy. 251 and permission of instructor.

PSY 470: SENIOR SEMINAR IN PSYCHOLOGY 3 s.h.

An advanced course designed to bring together information from a wide range of psychological sub-disciplines and to provide the student with an opportunity to see how the various aspects of psychology interrelate. Emphasis is placed on analysis of controversial issues, with the intent of developing both the student's expertise in psychology and ability to dissect theoretical controversy.

PSY. 499: SUPERVISED FIELD EXPERIENCE 3 s.h.

Under supervision students are placed in such field settings as mental health clinics, family services, etc., where they acquire observational experience with the application of helping skills in the human services. May be repeated once for credit and requires a 10 hour time commitment per week. Prerequisites: Permission of instructor, junior standing, and Psy. 464. Open to any student majoring in a human service health related area. Each semester.

Psy. 211, General Psychology, is a prerequisite for all Psychology courses except as indicated.

RUSSIAN

In addition to the courses listed below, students of Russian have an opportunity to study for a summer, a term, or an entire academic year in the USSR.

RUSS. 101: SPECIAL TOPICS: THE EUROPEAN MIND 3 s.h.

Historical and contemporary developments on the European intellectual scene will be covered by experts on individual countries with regard to their relevance for the present American student generation.

The special subject of each semester offering will be announced in pre-registration. Open to all students of the university without prerequisites and may be taken up to three times for credit provided that different topics are offered. Three-year cycle.

RUSS. 109: RUSSIAN LITERATURE IN TRANSLATION 3 s.h.

Synoptic studies of major works by Russian writers of the 19th and 20th century with particular emphasis on philosophical ideas, literary methods, and characters which have had a considerable influence upon Russian and other literatures. The course concentrates on comparative studies, with class discussion, reading, and lectures. No prerequisites: Conducted in English. Three-year cycle.

RUSS. 151: RUSSIAN I (ELEMENTARY I) 3 s.h.

Essentials of grammar with emphasis on aural comprehension and oral expression. Fall, annually.

RUSS. 152:	RUSSIAN II (ELEMENTARY II)	3 s.h.
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Continuation of Russian 151, with increasing emphasis on graded reading material.
Prerequisite: Russian 151 or equivalent. Spring, annually.

RUSS. 251:	RUSSIAN III (INTERMEDIATE I)	3 s.h.
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Systemic review of basic grammar; graded readings; conversation; translation; and composition on selected topics. Prerequisite: Russian 152 or two years of high school study and/or satisfactory placement test score. Fall, annually.

RUSS. 252:	RUSSIAN IV (INTERMEDIATE II)	3 s.h.
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Intensive reading of selected works; outside reading, with oral and/or written reports.
Prerequisite: Russian 251 or a satisfactory placement test score. Spring, annually.

RUSS. 253:	SCIENTIFIC RUSSIAN	3 s.h.
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A study of scientific terminology and style, with extensive readings in various scientific fields. Prerequisite: Russian 251 or equivalent. Science and mathematics majors may substitute this course for Russian 252. Three-year cycle.

RUSS. 255:	RUSSIAN CIVILIZATION I	3 s.h.
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A survey of the geography, history, literature, and culture of the Soviet Union designed to equip students with the materials and understanding necessary to the presentation of the language as a rich, meaningful, and integral part of a great civilization. Prerequisite: Russian 252 or four years of high school study and/or satisfactory placement score. Three-year cycle.

RUSS. 256:	RUSSIAN CIVILIZATION II	3 s.h.
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A survey of the geography, history, literature, and culture of the Soviet Union designed to equip teachers with the materials and understanding necessary to the presentation of the language as a rich, meaningful, and integral part of a great civilization. Three-year cycle.

RUSS. 351:	ADVANCED GRAMMAR AND COMPOSITION	3 s.h.
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Intensive oral and written drill, with emphasis on finer points of grammar, and colloquial and idiomatic usage. English-to-Russian translation, free composition, and conversation on everyday topics. Three-year cycle.

RUSS. 352: INTRODUCTION TO RUSSIAN LITERATURE 3 s.h.

Synoptic studies of literary history from the beginning to the present, with discussion on the main trends in Russian thought and its literary expression. Emphasis will be placed on the development of the Russian novel and drama during the Golden and Silver ages of Russian Literature, 19th and 20th century, and prominent writers of the Soviet period. Three-year cycle.

RUSS. 353: THE RUSSIAN DRAMA 3 s.h.

Dramatic works of the 19th and 20th centuries in poetry and prose. Studies of stylistics and themes, with special emphasis on the works by Anton Chekhov. Three-year cycle.

RUSS. 354: THE RUSSIAN NOVEL 3 s.h.

The great Russian novelists of the 19th and 20th centuries: Gogol, Turgenev, Lermontov, Goncharov, Dostoevsky, and Tolstoy. Major literary movements and philosophies. Epic character of Russian prose and evolution of the genre, poetic prose. Three-year cycle.

RUSS. 355: READINGS IN SOVIET AND RUSSIAN LITERATURE 3 s.h.

A survey of Russian literature since the Revolution, from 1917 to the present. New political mood, changes, and literature in the 60's and 70's characterized by human stories as opposed to socialist realism. Three-year cycle.

RUSS. 361: DOSTOEVSKY 3 s.h.

Synoptic studies of the life and works of Dostoevsky, with emphasis on his great novels: *Crime and Punishment*, *The Idiot*, *The Possessed*, and *The Brothers Karamazov*. Comparative and contrastive analysis of ideas in major works. Three-year cycle.

RUSS. 451: SUPERVISED READINGS IN RUSSIAN 3 s.h.

This course is devoted to selected readings determined in relation to the needs and interests of individual students.

SCIENCE AND SCIENCE EDUCATION

PH. SCI. 111: BASIC PHYSICAL SCIENCE: CHEMISTRY* 3 s.h.

This course is intended for non-science majors and does not assume prior familiarity with chemistry. It does not count toward requirements for science majors, but can be applied to fulfill the general education math-science requirements for non-science majors.

Selected chemical principles are explored with the purpose of providing a background that will enable the student as a citizen to understand issues involving the interaction of science and society; brief experiments are often included. Students who prefer a more traditional chemistry course may elect either Chemistry 151 or 153 to fulfill their general education requirements. No prerequisites: Each semester.

PH. SCI. 112: BASIC PHYSICAL SCIENCE: PHYSICS AND ASTRONOMY 3 s.h.

This course is intended for those students not majoring in the sciences or mathematics, and does not presume any prior familiarity with the subject. Topics discussed are descriptive astronomy, cosmology, light and optics, force and motion, fundamental electrical phenomena and simple circuits, the special theory of relativity, and radioactivity and the atom. Brief experiments are integrated with the subject matter to emphasize the experimental basis of theory. The Planetarium is extensively used in conjunction with the sections on astronomy. No prerequisites. Each semester, plus summer.

PH. SCI. 211: SOUND, MUSIC AND ACOUSTICS 3 s.h.

This course is primarily designed for the student majoring in Music or in a discipline in which the Physics of Sound is of considerable importance. Topics include the basic physics of wave motion, superposition of waves, transverse and longitudinal waves, diffusion, diffraction and reflection, intensity, quality, and harmonic analysis of sound waves, reverberation and absorption, sound production by musical instruments and the voice, noise and harmony, factors in hearing, and the electronic recording and reproduction of sound. Spring, annually.

PH. SCI. 457: INTRODUCTION TO ELECTRONICS FOR AUDIO APPLICATIONS 3 s.h.

A survey of basic electricity and the physics of sound, with fundamental electronics. The course is intended to give the student an understanding of basic electronics used in audio applications, especially testing and trouble-shooting equipment. It is primarily intended for students in speech pathology and audiology, as an elective for both undergraduate and graduate students. Fall, annually.

*No student may take, for credit, a chemistry course at the 100 level after having successfully completed any chemistry course numbered 300 or above.

SCIENCE EDUCATION

SCI. ED. 322: TEACHING OF ELEMENTARY SCIENCE 3 s.h.

Methods of presenting science in the elementary school. Experiences are provided in learning process, scope and sequence of science concepts, methods of investigation, problem solving, laboratory skills, scientific attitudes, newer curricula, reading materials, observing and working with elementary school children, developing, teaching and evaluating lessons. 2 hour lecture and 2 hours laboratory weekly. Each semester.

SCI. ED. 331: BIOLOGICAL INVESTIGATIONS 3 s.h.

This course is designed to provide the prospective teacher with a more adequate background in biology and laboratory experiences applicable to science teaching. The course has three aspects (1) Identification and natural history of local flora and fauna, (2) application of basic biological principles, and (3) development of skills necessary to carry out biological investigations. On demand.

SCI. ED. 456: ELECTRONICS FOR THE HIGH SCHOOL
SCIENCE TEACHER 4 s.h.

The course is intended for the science teacher who has had little or no previous course work in physics or mathematics. The subjects covered include the fundamental laws of electricity and magnetism, alternating current theory, and the theory and practical application of such devices as ammeters, voltmeters, oscilloscopes, vacuum tubes, transistors, power suppliers, amplifiers, and oscillators. Examples of some of these devices will be built in the laboratory, and general procedures for trouble-shooting faulty equipment will be illustrated. Summer only, on demand.

SCI. ED. 460: SCIENCE CURRICULA IN THE
MIDDLE AND JUNIOR HIGH SCHOOL 3 s.h.

A course designed to acquaint students with modern science curricula for the junior high/middle school levels. Recent developments in curricular objectives, science content, teaching strategies, and laboratory activities are stressed. Individual projects included. Spring, odd-numbered years.

SCI. ED. 463: ASTRONOMY: OBSERVATION AND FIELD STUDIES 3 s.h.

This is a course in the experimental tools and methods useful in astronomy. It is not an encyclopaedic survey of astronomy, but concentrates on mastery of important techniques and concepts by a "do-it-yourself" process. It complements courses in descriptive astronomy (E.S. 353 and Sci. Ed. 550) rather than duplicating them, serving much the same purpose as a laboratory in astronomy. The student will build simple telescopes, spectroscopes, and other astronomical instruments. Summer only.

SCI. ED. 466: FIELD PHOTOGRAPHY 3 s.h.

This course is designed to teach the student how to use a modern camera and accessories to photograph subjects in the field. Techniques of close-up, telephoto and wide-angle photography as well as film development, lighting, use of filters and composition will be included. In addition, the student will have a chance to learn and practice techniques for photographing such objects as small animals, birds, flowers, large animals, and other field subjects. Camera and film to be provided by students. Summers, on demand.

SCI. ED. 485: PLANETARIUM OPERATION AND MANAGEMENT 3 s.h.

An introduction to the techniques of operation and maintenance of planetarium projectors. Opportunities are provided for writing and presenting programs at various levels of

instruction. The use of auxiliary projectors, the production of audio-visual materials, multi-media displays, and live versus programmed presentations are emphasized. Prerequisite: E.S. 353 or consent of instructor. On demand.

SOCIOLOGY AND SOCIAL WORK

SOC. 211: PRINCIPLES OF SOCIOLOGY 3 s.h.

This is the basic course in sociology dealing with the interaction arising from the association of human beings. Emphasis is placed upon social heritage; the meaning and functions of culture; the characteristics of major social institutions. Each semester.

SOC. 250: SPECIAL TOPICS IN SOCIOLOGY

Offered occasionally.

SOC. 300: INTRODUCTION TO SOCIOLOGICAL RESEARCH 3 s.h.

An introduction to the social research process and the methods of sociology, including the logic and methods of science; fundamental research methodologies, designs and strategies; basic techniques of data collection, organization, analysis and presentation. Prerequisites: Soc. 211; 3 hours in statistics, or permission of the instructor. Once annually.

SOC. 310: MAJOR FORCES AND FIGURES IN SOCIOLOGY 3 s.h.

History of pioneers in the field and their conceptualization of Sociology as a science; focuses on the works of particular sociologists whose concepts not only have historical interest but also great impact on the subject matter and methods of contemporary society. Comte, Durkheim, Marx, and Weber to be considered in greater depth. Prerequisites: Soc. 211 or permission of the instructor.

SOC. 321: SOCIOLOGY OF WORK 3 s.h.

A study of occupational and organizational work settings, meanings and functions of work. The final weeks emphasize selected work place reforms and proposed structural changes of work. Prerequisite: Sociology 211 or Anthropology 211. Once annually.

SOC. 351: CONTEMPORARY SOCIAL PROBLEMS 3 s.h.

This course deals with problems that affect the integration and functioning of society as a whole. Such topics are economic concentration, "the sick cities," and mass culture, as well as selected aspects of solutions to social problems. Prerequisite: Soc. 211 or permission of the instructor. Once annually.

SOC. 352: THE FAMILY 3 s.h.

This course deals with the development of the family and the home in its historical, economic, and legal aspects. The various factors influencing the organization, disorganization and reorganization of the family as well as the modern trends in the basic institution are considered. Prerequisite: Sociology 211 or permission of the instructor. Once annually.

SOC. 361: SOCIOLOGY OF DEVIANT BEHAVIOR 3 s.h.

The course examines deviance as a constant social phenomenon, as well as forms of behavior which may be classified as deviant, especially in terms of American society. Emphasis will be given not only to the nature and forms of deviance, but also the reactions and orientations to deviance on the part of the deviant and of the larger society. Prerequisite: Sociology 211 or permission of the instructor. Once annually.

SOC. 362: RACIAL AND ETHNIC MINORITY PROBLEMS 3 s.h.

Background of racial and ethnic minority group relations. Contemporary aspects of inter-ethnic and inter-racial group problems. Proposals for alleviating and resolving problems and their implications. Prerequisite: Sociology 211 or permission of the instructor. Once annually.

SOC. 363: URBAN SOCIOLOGY 3 s.h.

Study of urban communities, their composition, structure, and development in relation to other types of communities. The growth of mass urban society, population shifts and trends, and their implications for basic social institutions. Special emphasis upon contemporary urban problems and proposals of urban planners and community developers to meet them. Prerequisite: Sociology 211 or permission of the instructor. Once annually.

SOC. 370: FUNDAMENTALS OF POPULATION STUDY 3 s.h.

A study of factors influencing the quality and quantity, distribution, growth, and movement of populations. An examination of population trends and the implication for social problems and social policy. Prerequisites: Sociology 211 or permission of the instructor. On demand.

SOC. 380: COMMUNITY INSTITUTIONS 3 s.h.

Analysis and study of the nature of community from a sociological perspective focusing on the structure, functions, and interrelationships of its institutions and theories of community organization and development. Once annually.

SOC. 395: SOCIAL CHANGE 3 s.h.

Analysis of social change processes through study of major theories of social change and recent investigations in the general area of social change. Examination of major social forces and movements shaping contemporary patterns of social change, e.g., industrialization, rationalization, urbanization. Studies of the impact of inventions, discoveries, revolutions, reform movements and attempts to direct the course of change through various types of planning and development programs. Prerequisites: Soc. 211 or permission of the instructor. Fall, annually.

SOC. 400: INDEPENDENT STUDY IN SOCIOLOGY

Concentrated exploration and study of a problem or area of sociology not covered by existing courses and in accord with the student's interest and needs and under the direction of department faculty member. Prior to enrolling in the course, students are required to submit a written proposal outlining their plan of study for the instructor with whom they will be working. Enrollment limited to juniors and seniors with consent of the instructor. Maximum number of credits in Soc. 400 is limited to 9.

SOC. 499: SUPERVISED FIELD STUDY 3 s.h.

With the approval and under the supervision of a member of the faculty in sociology, students are placed in field-work settings, e.g., child welfare agencies, offices of aging, divisions of the criminal justice system, community development agencies, etc., where they will observe and work with persons responsible for carrying out a range of specific human services. Requires a ten-hour commitment each week. Prerequisites: permission of instructor, junior standing, and six hours in sociology.

SOCIAL WORK 311: PRINCIPLES OF SOCIAL WORK 3 s.h.

An overview of social work focusing on the historical development, major fields of practice and their application to social welfare issues and institutions. Prerequisites: Sociology 211 and either Sociology 351 or 363 or consent of the instructor. Fall, annually.

SOCIAL WORK 312: SOCIAL WORK WITH GROUPS**3 s.h.**

A study of the practice of groupwork, one of the core methods of social work, with emphasis on strategies used in various social work settings. Spring, annually.

SPANISH

In addition to the courses listed below, students of Spanish have an opportunity to study for a summer, a term, or an entire academic year in Spain and/or Mexico.

SPAN. 101: SPECIAL TOPICS: THE EUROPEAN MIND**3 s.h.**

Historical and contemporary developments to the European intellectual scene will be covered by experts on individual countries with regard to their relevance for the present American student generation.

The special subject of each semester offering will be announced in pre-registration. Open to all students of the university without prerequisites and may be taken up to three times for credit provided that different topics are offered. Two-year cycle.

SPAN. 109: SPANISH LITERATURE IN TRANSLATION**3 s.h.**

A study of representative Spanish literary works, with particular emphasis on the characters and ideas which have influenced both Spanish and other literatures. The course is conducted in English; no knowledge of Spanish required; no prerequisites. Two-year cycle.

SPAN. 151: SPANISH I (ELEMENTARY I)**3 s.h.**

Essentials of grammar with emphasis on aural comprehensions and oral expression. Each semester.

SPAN. 152: SPANISH II (ELEMENTARY II)**3 s.h.**

Continuation of Spanish 151, with increasing emphasis on graded reading material. Prerequisites: Span. 151 or equivalent. Each semester.

SPAN. 153: ELEMENTARY SPANISH CONVERSATION**3 s.h.**

Conversational practice, with extensive oral drill of grammatical patterns. Designed for those students who have met the prerequisites for Spanish 251 but are lacking in aural-oral proficiency. May be taken concurrently with Span. 251. Spring, annually.

SPAN. 251: SPANISH III (INTERMEDIATE I)**3 s.h.**

Systematic review of basic grammar; graded readings, conversation, translation, and composition of selected topics. Prerequisite: Span. 152 or two years of high school study and/or a satisfactory placement test score. Fall, annually.

SPAN. 252: SPANISH IV (INTERMEDIATE II)**3 s.h.**

Intensive reading of selected works; outside reading, with oral and/or written reports. Prerequisite: Span. 251 or a satisfactory placement test score. Spring, annually.

SPAN. 253: COMMERCIAL SPANISH**3 s.h.**

A study of commercial terminology and style, with extensive practice in the writing of business letters of various kinds. Prerequisite: Span. 251 or equivalent. Economics and business administration majors may substitute this course for Span. 252. Two-year cycle.

SPAN. 255: HISPANIC CIVILIZATION I 3 s.h.

A survey of Hispanic geography, history, literature, and culture designed to equip students with the materials and understanding necessary to the presentation of the language as rich, meaningful and integral part of a great civilization. Prerequisite: Span. 252 or four years of high school study and/or a satisfactory placement test score. Required of Spanish majors. Three-year cycle.

SPAN. 256: HISPANIC CIVILIZATION II 3 s.h.

Continuation of Span. 255, which is, however, not prerequisite. Three-year cycle.

SPAN. 350: ADVANCED CONVERSATION AND COMPOSITION 3 s.h.

Intensive oral and written drill, with emphasis on colloquial and idiomatic usage. Prerequisite: Span. 351. Three-year cycle.

SPAN. 351: ADVANCED SPANISH GRAMMAR AND COMPOSITION 3 s.h.

Intensive written drill, with emphasis on finer points of grammar, colloquial, and idiomatic usage. English-to-Spanish translation and free composition on everyday topics. Prerequisites: Span. 255 and 256 or a literature course. Three-year cycle.

SPAN. 352: INTRODUCTION TO SPANISH LITERATURE 3 s.h.

Study and discussion of the main trends in Spanish thought and literary expression. Emphasis is placed on the development of the novel and drama during the Golden Age. Four-year cycle.

SPAN. 353: THE MODERN SPANISH DRAMA 3 s.h.

A study of the modern theater in Spain, with emphasis on Benavente, Garcia, Lorca, Casona, Buero Vallejo, and Lopez Rubio. Four-year cycle.

SPAN. 354: THE MODERN SPANISH NOVEL 3 s.h.

The development of the novel in Spain during the 19th and 20th centuries, with emphasis upon the discussion of realism, regionalism, and naturalism. Four-year cycle.

SPAN. 355: THE "GENERATION OF 1898" 3 s.h.

Discussion of the principal authors of this group and their influence on 20th century Spanish thought, with an analysis of the role played by historical events in the development of the movement. Four-year cycle.

SPAN. 359: THE LITERATURE OF THE GOLDEN AGE 3 s.h.

A survey of the greatest period of Spanish literature, with selected readings from Cervantes' *Don Quixote* and the plays of Lope De Vega, Tirso de Molina, Calderon, and Ruiz de Alarcon. Four-year cycle.

SPAN. 360: SURVEY OF SPANISH-AMERICAN LITERATURE 3 s.h.

Study and discussion of the evolution of Spanish-American literary expression from the colonial period to the Twentieth Century. Four-year cycle.

SPAN. 361: THE HISTORY OF MEXICAN LITERATURE 3 s.h.

The history of Spanish literature in Mexico from the Conquest to the present, with special emphasis on Lizardi, Altamirano, the novelists of the Revolution, and selected contemporary writers. Four-year cycle.

SPAN. 451: SUPERVISED READINGS IN HISPANIC LITERATURE 3 s.h.

This course is devoted to selected readings determined in relation to the needs and interest of the individual major. On demand.

SPECIAL EDUCATION

SP. ED. 210: HUMAN EXCEPTIONALITIES 3 s.h.

The course is a study of the causes, characteristics, and implications — educational, social, and vocational — of children who are exceptional because of intelligence, physical development, behavior, vision, hearing, and speech. It also acquaints prospective professional personnel with vocational opportunities in Special Education and Rehabilitation. Each semester on Main Campus, and fall semester at Venango Campus.

SP. ED. 215: HUMAN RELATIONS SKILLS TRAINING 2 s.h.

The course deals with human relations skills in special education settings in both public school and community settings. Each semester on Main Campus, and fall semester at Venango Campus.

SP. ED. 220: NATURE OF MENTAL RETARDATION 3 s.h.

This is a comprehensive study of the biological, psychosocial, and educational implications of retarded mental development, including a consideration of etiology; assessment and diagnosis; educational programs, including preschool and postschool; adult social and vocational adjustment; national and local programs; and research. Prerequisite: Sp. Ed. 210. Each semester on Main Campus, and spring semester at Venango Campus.

SP. ED. 225: EARLY FIELD EXPERIENCES 1 s.h.

An early exposure to types of special education programs for various types of exceptional individuals including community programs, institutions, and schools. Each semester on Main Campus, and spring semester at Venango Campus.

SP. ED. 230: BEHAVIOR DISORDERS 2 s.h.

This course will familiarize the student with atypical behaviors using coexistent classification systems. Causation, evaluation, and rehabilitation will be studied with an emphasis on the limitations and responsibilities of various professionals and paraprofessionals. Offered at Venango Campus only.

SP. ED. 235: LEARNING DISORDERS 2 s.h.

A study of the causes and characteristics of learning disorders. Concerns of diagnosis, prescription, and classroom management are presented, with emphasis on the role of the paraprofessional. Offered at Venango Campus only.

SP. ED. 240: THE PHYSICALLY HANDICAPPED 3 s.h.

The course presents the major physical anomalies, the reaction of family and individuals to the handicap, therapeutic procedures, rehabilitation services, and direct contacts with persons in programs for the handicapped. Prerequisite: Sp. Ed. 210. Each semester on Main Campus, and fall semester at Venango Campus.

SP. ED. 245: BEHAVIOR MANAGEMENT 2 s.h.

This experience provides persons with knowledge and skills to analyze instructional settings, organize learners for instruction, and maintain a supportive learning climate for handicapped individuals. Offered at Venango Campus only.

**SP. ED. 250: THE HELPING RELATIONSHIP:
PRINCIPLES AND PROCEDURES** 3 s.h.

This course will assist students to acquire knowledge and skill in the performance of required tasks and/or roles of Habilitative Service staff in developing humanizing environments for exceptional persons in various settings. Prerequisites: Sp. Ed. 210, 220, 230, 235. Offered at Venango Campus only.

SP. ED. 295: FIELD EXPERIENCE 6 s.h.

This is a half-time, full semester field experience in selected programs. The field experience will focus on assisting in the delivery of human/educational services to exceptional individuals. Prerequisites: Minimum of 45 semester hours and Sp. Ed. 230, 235, 250. Offered at Venango Campus only.

SP. ED. 305: SPECIFIC LEARNING DISABILITIES 3 s.h.

The course will focus on the nature of specific learning disabilities. The areas of concern are the history, definition, characteristics, assessment, strategies and tactics of instruction and/or remediation, vocational implications and Federal and State laws and regulations in regard to the individual who is learning disabled. Each semester.

SP. ED. 310: SOCIAL AND EMOTIONAL DISTURBANCES 3 s.h.

This course will focus upon the nature of social and emotional disturbances, and familiarize the student with atypical behaviors utilizing current classification systems and theoretical models. History, etiology, nature, characteristics, syndromes, assessment, and education treatment approaches will be emphasized. Each semester.

SP. ED. 400: SPECIAL TOPICS 1-6 s.h.

This course deals with topical themes in Special Education to expand the knowledge and competence of teachers. Enrollment is by consent of the instructor. Summers only.

SP. ED. 410: EDUCATIONAL APPRAISAL AND PRESCRIPTION I 4 s.h.

This experience is conducted in the psychoeducational clinic of the Special Education Center and involves observation and active participation in educational diagnostic/prescriptive processes with persons who have learning problems. Prerequisite: Sp. Ed. 405. Each semester.

**SP. ED. 415: INSTRUCTIONAL DEVELOPMENT AND STRATEGIES
FOR MILDLY/MODERATELY HANDICAPPED** 6 s.h.

This is the study of the process of individualizing instruction for children with mild to moderate learning handicaps. It involves designing basic instructional sequences utilizing behavioral objectives, matching media and learner and goal-characteristics, identifying appropriate instructional strategies, and evaluating the effectiveness of instruction. Prerequisite: Sp. Ed. 405. Each semester.

**SP. ED. 420: INSTRUCTIONAL DEVELOPMENT AND STRATEGIES
FOR SEVERELY/PROFOUNDLY MULTIHANDICAPPED** 6 s.h.

This is a study of the process of individualizing instruction for children with severe to profound learning handicaps. It involves designing basic instructional sequences utilizing behavioral objectives, matching media with learner and goal-characteristics identifying appropriate instructional strategies, and evaluating the effectiveness of instruction. Prerequisite: Sp. Ed. 405. Each semester.

SP. ED. 425: BEHAVIOR MANAGEMENT IN SPECIAL EDUCATION SETTINGS 3 s.h.

This course considers contemporary curricular innovations in educational programs for exceptional children and youth, with particular attention to the sociocultural implications of changing curricular practices and the new instructional media and technology. Each semester.

SP. ED. 435: INSTRUCTIONAL DEVELOPMENT AND STRATEGIES FOR THE GIFTED AND TALENTED 6 s.h.

This course will be (when possible) a workshop with school children and intended to develop the capacity of the educator to plan, develop, deliver and evaluate programs that will help the gifted and talented realize their individual and collective potential. Prerequisites: Sp. Ed. 210 or Psych. 522, or teaching certificate.

SP. ED. 440: INSTRUCTIONAL DEVELOPMENT AND STRATEGIES FOR CULTURALLY DIFFERENT CHILDREN 3 s.h.

This is a study of the process of individualizing instruction for children who are not members of the dominant culture and whose cultural membership significantly influences the educational process and school performance. It involves designing basic instructional sequences, selecting and matching media with learner and goal characteristics, identifying culture-appropriate instructional strategies and evaluating the effectiveness of instruction. Summer only.

SP. ED. 445: CAREER EDUCATION FOR THE DISABLED 2 s.h.

This course will examine career education for the disabled as a whole life process involvement that includes not only vocational needs, but daily living, personal/social, and occupational skills. Each semester.

SP. ED. 450: STUDENT TEACHING 12 s.h.

Observation and participation in teaching children with retarded mental development and in activities related to the performance of a teacher's work. Each semester.

SP. ED. 499: INDEPENDENT STUDIES IN SPECIAL EDUCATION 1-3 s.h.

This course is designed to provide students with an opportunity to explore an area of special needs or interest in Special Education in depth under the supervision of a faculty member of the department. Students must develop a proposed study plan and secure the approval of the department chairman prior to registration. Prerequisite: Junior or senior standing.

H.S. 405: SUBSTANCE ABUSE 3 s.h.

This is a study of the physiological and psychosocial implication of drug or alcohol abuse, over-medication, and drug dependence, with concern for the processes of intervention, advocacy, treatment, and prevention. Fall, annually.

H.S. 460: MODELS OF HUMAN SERVICES DELIVERY SYSTEMS 3 s.h.

This course analyzes the purposes, structure and context of the entire network of human services delivery models in Pennsylvania with comparative reference to selected models outside of Pennsylvania. Fall, annually.

H.S. 465: ASSESSMENT OF ADAPTIVE BEHAVIOR AND VOCATIONAL POTENTIAL 3 s.h.

This course provides a conceptual frame of reference to the theoretical aspect of adaptive

behavior (social and vocational), the instrumentation and systems of assessment, and directed experience in the processes of actual client-assessment, documentation and reporting Fall, annually

H.S. 470: THERAPEUTIC AND RESIDENTIAL SERVICE PROGRAMS 6 s.h.

This course analyzes the entire spectrum of habilitative, therapeutic, recreational, and residential programs, at the service delivery level, that are mandated and provided in Pennsylvania for persons with special needs. Statutes and regulations are studied and practicum experiences are conducted in human service programs. Spring, annually.

H.S. 495: FIELD EXPERIENCE IN HABILITATIVE SCIENCES 15 s.h.

This is a full-time, semester-long supervised experience in community based habilitation programs for developmentally disabled persons, including professional development experiences in community residential programs, vocational rehabilitation services and MH/MR Base Service Units, or similar social services. Each semester.

SPEECH COMMUNICATION AND THEATER

SCT 101-104: SPEECH COMMUNICATION AND THEATER ACTIVITIES 1-6 s.h.

SCT 101-104 may be taken for 1-6 credits on a contract basis. Students may earn no more than 3 credits each semester through participation in one, or more than one, of the SCT activities, with a maximum of 6 credits possible in SCT 101-104. Credit for SCT activities is **optional** and voluntary participation (without credit) is also encouraged. Instructors determine the number of credits and have the authority to approve/reject any contract for credit in SCT 101-104 based on the student's interest and ability in the activity. Credits earned in SCT 101-104 may be counted toward graduation under Personal Development and Life Skills or Free Electives.

SCT 101: DEBATE 1-6 s.h.

1-6 credits may be earned through participation on the Debate Team by successfully completing the terms of the 'Contract for Credit in SCT Activities,' subject to approval by instructor and department chairperson. No more than 3 credits may be taken in SCT 101 during any one semester. Students should not enroll in SCT 101 and 256 or 257 for credit concurrently. Each semester.

SCT 102: INDIVIDUAL SPEAKING EVENTS PROGRAM 1-6 s.h.

1-6 credits may be earned through participation on the Individual Events Team by successfully completing the terms of the Contract for Credit in SCT Activities, subject to approval by instructor and department chairperson. No more than 3 credits may be earned in SCT 102 during any one semester. Students may not enroll concurrently in SCT 102 and SCT 155, 213, or 254 without instructor permission. Each semester.

SCT 103: THEATRICAL PERFORMANCE 1-6 s.h.

1-6 credits may be earned through performance in College Theater productions by successfully completing the terms of the 'Contract for Credit in SCT Activities,' subject to approval by instructor and department chairperson. No more than 3 credits may be earned in SCT 103 during any one semester. Students may not enroll concurrently in SCT 103 and SCT 254, 350, or 361 without instructor permission. Each semester.

SCT 104: THEATRICAL PRODUCTION 1-6 s.h.

1-6 credits may be earned through participation in technical theatre by successfully completing the terms of the 'Contract for Credit in SCT Activities,' subject to approval by instructor.

tor and department chairperson. No more than 3 credits may be earned in SCT 104 during any one semester. Students should not enroll for credit concurrently in SCT 104 and 161, 262, or 351. Each semester.

SCT 113: FUNDAMENTALS OF SPEECH 3 s.h.

Study, application, and evaluation of principles of organization, evidence, reasoning, critical thinking, verbal and nonverbal behavior, one-way and two-way communication, and small group interaction in the oral communication setting; emphasis upon meeting the individual needs of students through individualized instruction utilizing communication experiences. Each semester.

SCT 115: PARLIAMENTARY PROCEDURE 3 s.h.

The objective of the course is to investigate procedures used by members and officers of decision-making bodies in committees, groups, governmental and formal organizations. Fall, annually.

SCT 120: THEATER PLAY PRODUCTION 3 s.h.

Introductory work in elements of theater, including directing, acting, make-up, criticism, stagecraft, and stagelighting. No prerequisites. Fall, annually.

SCT 155: INTRODUCTORY INTERPRETATION 3 s.h.

During this course the student will explore the art of interpretation, have the opportunity to develop and improve basic performance skills and train to share the world of literature with audiences in media or the theater. Each semester.

SCT 161: STAGECRAFT 3 s.h.

A study of the theory, materials and practice of stage construction. In addition to technical instruction, significant emphasis is placed on the relationship between the dramatic function of the setting and its actual physical realization. Student projects and required production labs provide practical experience. Spring, annually.

SCT 200: INTERPERSONAL COMMUNICATION THEORY AND PROCESSES 3 s.h.

The course focuses on the study of interpersonal communication, specifically the investigation of major theories and research in the field and the application of those theories to improving the students' interpersonal skills. Prerequisite: SCT 113 or consent of instructor. Each semester.

SCT 201: MOVEMENT AND DANCE FOR THE STAGE 3 s.h.

This course is devoted to fundamental movement and creative dance for the actor. Emphasis is on period styles of movement and creative dance for musical theater presentations. Use of body movement exercises for performance, discipline and non-verbal communicative forms are also encompassed. Each semester.

SCT 210: INTRODUCTION TO RHETORICAL THEORY 3 s.h.

The course is designed to investigate, on a fundamental level, the historical and conceptual development of the major theories of rhetorical discourse. Theories from classical to contemporary will be applied to analysis of the spoken word. Course stresses speech making and criticism of historical and current political rhetoric. Spring, odd numbered years.

SCT 213: ADVANCED PUBLIC SPEAKING 3 s.h.

Inquiry into the practice in the principles of effective public speaking. Detailed analysis of

the areas of invention, arrangement, style, and delivery, and an introduction to speech criticism as a tool to improve the speaker's own abilities. Prerequisite: SCT 113 or consent of instructor. Each semester.

SCT 214: BUSINESS AND PROFESSIONAL SPEAKING 3 s.h.

This course will focus upon how people use speech communication skills in business and professional settings. It will survey modern speech communication theory, as well as coping in groups, listening, negotiation, influencing others, instructional communication and barriers to effective business and professional speaking. This course is both theory and performance based and students are expected to make several oral presentations. Prerequisite: SCT 113 or consent of instructor. Each semester.

SCT 215: SPECIAL TOPICS IN SPEECH COMMUNICATION AND THEATER 1-6 s.h.

This course focuses on offering special topics reflecting the interest of students. The course content varies from semester to semester. Suitable for both majors and non majors in Speech Communication and Theater. May be taken for a maximum of 9 credits in the major. On demand.

SCT 251: VOICE AND ARTICULATION 3 s.h.

The objective of this course is to help students improve their speech by the elimination of faulty voice and articulation habits. Attention is given to such basic skills as vocal variety, projection, breath control, tone production and articulation. Tape recordings are used as a helpful device for analyzing problems and noting progress. Each semester.

SCT 253: INTRODUCTION TO THE THEATER 3 s.h.

A study of the techniques and contemporary practices in the organization of dramatic material, survey of division of labor for creation of dramatic material, and an analysis of the literary concepts, such as realism and existentialism, that motivate the contemporary audience. Each semester.

SCT 254: PRINCIPLES OF ACTING I 3 s.h.

Training in the basic elements of the actors' craft. Entering and living through imagined circumstances by the use of improvisation and theater exercises. Suitable general elective for non-theater majors. Fall, annually.

SCT 255: ADVANCED INTERPRETATION 3 s.h.

Inquiry into the advanced techniques of the oral interpretation of poetry. Emphasis upon analysis and style. Prerequisite: SCT 155. Spring, odd numbered years.

SCT 256: ARGUMENTATION AND DEBATE 3 s.h.

Study of argumentation in area of academic debate and legal world. Emphasis is placed on applying theories and techniques of argumentation to developing analytical abilities, reasoning, use of data and evidence to support arguments. Fall, annually.

SCT 257: ADVANCED DEBATE 2 s.h.

Further experience in competitive debating and in a variety of debating forms is provided. Prerequisite: Consent of instructor. On demand.

SCT 262: STAGE LIGHTING 3 s.h.

An introduction to the theory and practice of theater lighting. Areas of study range from the history and purpose of theater lighting to its mechanics and control, including sections on

optics, electrical theory, and the physiology of color perception. Student projects and required production labs provide practical experience in stage lighting. Prerequisite: SCT 161 or consent of instructor. Fall, annually.

SCT 264: DISCUSSION 3 s.h.

The course is designed to expand the students' knowledge of the concepts and theories of group communication. Emphasis is placed on the task, leadership and interpersonal skills of group participants. Each semester.

SCT 300: COMMUNICATION IN ORGANIZATIONS 3 s.h.

This course is designed to give insight into traditional and modern concepts of channels of communication in simple and complex organizations with emphasis on informal and formal group dynamics, interpersonal relationship, leadership, communication theory and creativity. Considerable attention is given to interviewing. Each semester.

SCT 301: ADVANCED MOVEMENT AND DANCE FOR THE STAGE 3 s.h.

The course is an extended study of the principles of movement control as begun in beginning Movement and Dance. The course of study begins with the basic principles of breathing, tension-relaxation exercises and theater movement exercises. The course then moves into areas of intermediate ballet exercises, period style movement and ballroom, softshoe and tap dancing. Spring, annually.

SCT 310: THE RHETORIC OF CONFLICT 3 s.h.

This course introduces the student of rhetorical theory to the tools for analysis of individuals and groups which seek change in the political and social sphere, outside the normal decision-making process. Spring, even numbered years.

SCT 311: PERSUASION 3 s.h.

Study and practice in persuasive speaking. General theories of persuasion, the role of persuasion in a democratic society, and an introduction to modern experimental research in the area included. Spring, odd numbered years.

SCT 312: GENERAL SEMANTICS 3 s.h.

An investigation to the relationship between words and the realities they represent. Special emphasis will be given to an understanding of personal, political, and international problems that arise due to semantic breakdown in the communication process. Fall, annually.

SCT 333: SUMMER DIRECTION OF FORENSICS WORKSHOP 3 s.h.

A two week course designed to introduce the college student to high school debate and individual events. The course orients the college student to coaching and directing high school debate and individual events as well as administering forensic tournaments. Application is provided by a coinciding non-credit high school workshop. The student will be concentrating in either debate or individual events, with the option of taking the course on a second occasion to gain concentration in the area not previously studied. Prerequisite: At least 2 of the following: SCT 113, 213, 256, 257, or consent of the instructor. May be taken on two separate occasions for a maximum of 6 credits. On demand.

SCT 350: SUMMER DRAMA WORKSHOP 6 s.h.

The summer drama workshop combines study and practice in the dramatic arts and includes formal, intensive study in acting, play production, direction, makeup, scene design, stage lighting, and stagecraft. In conjunction with the workshop, Clarion University sponsors a Summer Theatre Company consisting of members of the workshop which produces major shows. Summer, annually.

SCT 351:	ADVANCED THEATER PRODUCTION	6 s.h.
Advanced study and practice in the dramatic arts, including projects in scene design, theater management and acting. Students will work with members of the Summer Drama Workshop in the production of major plays for the Clarion Summer Theater. Prerequisites: SCT 120 or 350. Summer, annually.		
SCT 352:	PLAY DIRECTING	3 s.h.
A study of the fundamentals and procedures of play directing and problems faced in educational theater, including analysis of the script, methods of casting, and rehearsal. Students direct one-act plays for public presentation. Fall, even numbered years.		
SCT 355:	INTERPRETATION OF PROSE FICTION	3 s.h.
Practice in the oral expression of the dynamics of narrative prose fiction. Specifically, it affords the student of interpretation an in-depth experience with focus on gaining performance skills and developing knowledge of archetypal themes. Prerequisite: SCT 155. Spring, even numbered years.		
SCT 358:	PSYCHOLOGY AND SPEECH COMMUNICATION	3 s.h.
This is a theoretical survey course which examines the psychological aspects of communication codes, interpersonal communication, structural communication and the interaction of mediated communication. Spring, annually.		
SCT 359:	HISTORY OF THE THEATER	3 s.h.
History of plays and playwrights from the fifth century B.C. to the present. Spring, annually.		
SCT 361:	PRINCIPLES OF ACTING II	3 s.h.
Building a character through textual analysis and practical work based on text. Analysis of scene structure, use of sub-text, actions and objectives in the performance of selected scenes. Spring, annually.		
SCT 362:	PRINCIPLES OF STAGE DESIGN	3 s.h.
Study and practice in the aesthetics, methods, and techniques of setting and lighting design for the theater. Covers both periods and contemporary analysis. Prerequisite: SCT 161 or consent of instructor. Spring, annually.		
SCT 363:	THEATRICAL MAKE-UP	3 s.h.
Fundamentals and application of stage make-up. Fall, semiannually, odd numbered years.		
SCT 364:	SCENE PAINTING FOR STAGE	3 s.h.
Studio instruction in the use of brushwork and pigment to develop landscape, ornament, panelling, and architectural detail in stage scenery based on the analysis of form and source of light. Fall, odd numbered years.		
SCT 365:	ACTING FOR TELEVISION	3 s.h.
Designed to acquaint the student with the visual and oral techniques of movement, voice and characterization required for television productions. Prerequisite: acting students enrolled in the BFA program or instructor's consent. Spring annually in conjunction with Comm. 660: TV Production.		

SCT 366: STAGE DIALECTS 3 s.h.

The course focuses on the major dialects for the stage based upon study of the international phonetic alphabet. Prerequisite: SCT 251: Voice and Articulation or consent of instructor. On demand.

SCT 367: THEATRICAL COSTUMING 3 s.h.

The emphasis of this course is on the designing and building of costumes for the stage. Related to this basic emphasis are understanding costume history, fashion trends and rationales, developing a sense of visual design, incorporating the elements of color, tone, shape, texture, and a sense of theatre. Student projects and required lab provide experience in the craft. Spring, even numbered years.

SCT 375: NON-VERBAL COMMUNICATION 2 s.h.

This course is designed to increase the awareness of students in the areas of nonverbal communication. The course describes and analyzes the various concepts of nonverbal communication, applies them to actual situations and relates them to the entirety of the communicative process. Spring.

SCT 400: CROSS CULTURAL COMMUNICATION 3 s.h.

The course is designed to make the student aware of the role played by culture in developing personal attitudes, values, and behavior, and to apply this awareness to communicating across cultural differences in a variety of situations including interviewing, group discussion and negotiation. Offered on a tri-semester basis.

SCT/COMM. 411: FOUNDATIONS OF BROADCASTING 3 s.h.

An introduction to the broadcasting industry including history, technical aspects, station and network organization, advertising, ratings, social influences, programming and production. A foundation course for radio-TV career preparation, related fields of communication, and the development of knowledgeable consumers of the broadcast media. Fall, annually.

SCT 415: HONORS SEMINAR IN SPEECH COMMUNICATION 3 s.h.

This course is made available only to students who demonstrated a willingness and ability to undertake advanced academic work in the area of Speech Communication. Admission by department invitation only. On demand.

SCT 461: STYLES OF ACTING 3 s.h.

The emphasis of this course is on providing an understanding of the various period styles of acting, tracing theatrical performance history from classical Greek tragedy to contemporary acting theories. The focus is on the comprehension of each style and the application of those principles in a classroom situation. Prerequisites: SCT 254, 361 or consent of instructor. Rotation on tri-semester basis.

SCT 490: INDEPENDENT STUDY 1-3 s.h.

Selected topics for research and/or performance projects in Speech Communication and Theater. Prior to registration students need to obtain an advisor who will direct their study. Approval by appropriate dean required.

SCT 495: INTERNSHIP IN SPEECH COMMUNICATION
AND THEATER 1-12 s.h.

The internship program gives the student the opportunity to apply classroom theory and techniques in business, government, theater, and other cooperating organizations. Course

open to any Speech Communication and Theater major with a junior or senior standing with consent of Department. Student must have a 2.5 Q.P.A. or higher and 3.00 Q.P.A. in a major On demand

SPEECH PATHOLOGY AND AUDIOLOGY

SPA 450: SPEECH SCIENCE I 3 s.h.

This course studies models of the speech mechanism. Normal aspects of the physiology and acoustics of speech production are strongly emphasized. Fall, annually.

SPA 451: ANATOMY OF SPEECH AND HEARING MECHANISMS 3 s.h.

Study of the anatomy and physiology of the speech and hearing mechanisms. Fall, annually.

SPA 452: SPEECH PATHOLOGY I 3 s.h.

This course is an introduction to the profession of Speech Pathology emphasizing the description, diagnosis and treatment of voice, articulation, and stuttering disorders. Fall, annually.

SPS 453: SPEECH PATHOLOGY II 3 s.h.

This course emphasizes the description, diagnosis, and treatment of aphasia, cleft palate, and cerebral palsy. Spring, annually.

SPA 454: CURRICULUM MATERIALS FOR SPEECH CORRECTION 3 s.h.

Teaching techniques, source materials, visual aids, and special techniques to be employed in speech pathology are studied. Fall, annually.

SPA 455: SPEECH CORRECTION FOR THE CLASSROOM TEACHER 3 s.h.

Designed to acquaint students with speech problems common to children on the elementary level. Emphasis is placed on the study of materials, methods, and techniques used by the classroom teacher in improving the speech of all children. On demand.

SPA 456: SPEECH SCIENCE II 3 s.h.

Transcription of normal and deviant speech using the International Phonetic Alphabet. Application of phonetics and phonemics to language and speech pathology. Instruments used in speech and hearing are studied. Spring, annually.

SPA 457: DEVELOPMENTAL SEQUENCES IN LANGUAGE AND SPEECH 3 s.h.

This course is a study of the development of language and speech in the normal child. Normative data in speech and language development are studied. Each semester.

SPA 458: LANGUAGE DISORDERS IN CHILDREN 3 s.h.

This course is designed to provide students with an understanding of language disorders in children, etiological factors associated with them, diagnostic and evaluative techniques, and therapeutic methodologies. Prerequisite: SPA 457. Spring, annually.

SPA 460: HEARING PROBLEMS 3 s.h.

The nature of hearing disorders and the audiological, medical, social, psychological, and educational implications are investigated. Fall, annually.

SPA 463: SPEECH READING AND AUDITORY TRAINING 3 s.h.

A comprehensive study of auditory rehabilitation with emphasis upon auditory training, speech reading, and speech retraining. Prerequisite: SPA 460. Spring, annually.

SPA 464: AUDIOLOGY 3 s.h.

A continuation of SPA 460: Hearing Problems. Prerequisite: SPA 460. Spring, annually.

SPA 467: CLINICAL OBSERVATION 3 s.h.

This course covers basic information pertaining to the profession of speech pathology and audiology. The student is given an orientation to the facilities, equipment, and operations of the Clarion University Speech and Hearing Clinic. Various types of clinical reports are studied and the student taught basic observational skills both in the classroom and clinic as a prerequisite for client contact for speech and hearing science majors.

SPA 468: SPEECH AND HEARING CLINIC I: PRACTICUM 3 s.h.

Supervised clinical observation and practice in case study and conferences, diagnostic evaluations, remedial procedures, parent conferences and reporting. The application theory in the development of clinical skills with individuals and small groups of children and adults, for 135 clock hours. Prerequisite: SPA 452. Each semester.

SPA 469: SPEECH AND HEARING CLINIC II:
ADVANCED PRACTICUM 3 s.h.

A continuation of SPA 468. On demand.

SPA 472: SEMINAR IN SPEECH SCIENCE 3 s.h.

This course begins with a review of the speech mechanism as a servosystem and transducer, and basic knowledge of the physics of sound. The remainder of the course focuses attention and is structured on the concept that the speech mechanism is a chain of events physiologically, acoustically, and perceptually. Each link in this chain of events is studied in terms of basic knowledge, pertinent research, and each link's contribution to the speech chain as a whole. Prerequisite: SPA 465 or a basic course in phonetics and/or speech science. Fall, annually.

SPA 422: STUDENT TEACHING WITH THE
SPEECH AND HEARING HANDICAPPED 6 or 12 s.h.

Observation of and participation in school and clinic environments. Each semester.

SPA 498: SPECIAL TOPICS 1-6 s.h.

Topics in various areas of Speech Pathology and Audiology. The format used will be selected by the professor as most suitable to the study. The course may be offered on request of students, subject to the availability of staff. Enrollment by consent of the instructor. On demand.

SPA 499: INDEPENDENT STUDIES IN
SPEECH PATHOLOGY AND AUDIOLOGY 1-3 s.h.

This course is designed to provide students with an opportunity to explore an area of special need or interest in Speech Pathology and Audiology in depth under the supervision of a member of the department. Students must develop a proposed study plan and secure the approval of the proposed director and department chairperson prior to registration. Prerequisite: Junior or senior standing. Repeatable for a maximum of 6 s.h.

ENROLLMENT AT CLARION UNIVERSITY

Enrollment is almost equally divided between men and women and is drawn from the sixty-seven counties of the Commonwealth. Each year the number of students from states other than Pennsylvania increases and there is a small representation from foreign countries.

An analysis of the enrollment in August, 1982 showed the following counties contributing substantial numbers of students to Clarion.

Adams	16	Lancaster	29
Allegheny	911	Lawrence	67
Armstrong	76	Lebanon	10
Beaver	105	Lehigh	29
Bedford	7	Luzerne	26
Berks	25	Lycoming	36
Blair	31	McKean	48
Bradford	6	Mercer	169
Bucks	38	Mifflin	5
Butler	140	Monroe	7
Cambria	77	Montgomery	31
Cameron	7	Montour	6
Carbon	1	Northampton	19
Centre	12	Northumberland	22
Chester	22	Perry	1
Clarion	534	Philadelphia	54
Clearfield	134	Pike	7
Clinton	11	Potter	4
Columbia	18	Schuylkill	1
Crawford	103	Snyder	3
Cumberland	38	Somerset	14
Dauphin	46	Sullivan	1
Delaware	21	Susquehanna	5
Elk	76	Tioga	5
Erie	247	Union	4
Fayette	15	Venango	226
Forest	16	Warren	57
Franklin	15	Washington	96
Greene	5	Wayne	2
Huntingdon	5	Westmoreland	230
Indiana	19	Wyoming	2
Jefferson	141	York	28
Juniata	3		
Lackawanna	9		

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of the State System of Higher Education

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Wayne Stewart	Maintenance Superintendent

HEALTH SERVICES

Lawrence M. Gilford, B.S., M.D.	Director of College Health Services
Alice M. Spindler, Supervisor	Nurse
E. Jane Eshbaugh	Nurse
Ruth A. Hartle	Nurse
Ruth A. Kapp	Nurse
Elizabeth M. McCord	Nurse
Jane C. Paine	Nurse

FACULTY

Year in parentheses indicates year of appointment to faculty

- THOMAS A. BOND, (1980), Ph.D., President
University of Missouri, A.B.; University of Oklahoma, M.S., Ph.D.
- LEONARD M. ABATE, (1966), M.A., Assistant Professor, History
Northern Illinois University, B.A., M.A.; Additional graduate work at
the University of Pittsburgh.
- LEONARD ACKERMAN, (1981), Ed.D., Professor, Administrative Science
Rutgers, The State University, B.A.; George Washington University, Ed.D.
- ERNEST C. AHARRAH, (1956), Ph.D., Professor, Biology
Clarion State College, B.S., Pennsylvania State University, M.Ed.;
University of Pittsburgh, M.S., Ph.D.
- PAULA AMROD, (1981), M.M., Instructor, Music
Memphis State University, B.M., M.M.; Indiana University, D.M. candidate.
- LORRAINE AMSDELL, (1971), M.Ed., Assistant Professor, Nursing
Oil City Hospital School of Nursing, R.N.; University Pittsburgh,
B.S., in Nursing Ed.; Edinboro State College, M.Ed.; Clarion State
College, Certification in Social Studies; Additional graduate study,
State University of New York at Buffalo and Duquesne University.
- INEZ BAKER, (1966), M.A., Associate Professor, Communication
University of Cincinnati, B.S.; Teachers College, Columbia University,
M.A., Prof. Diploma.
- ROBERT H. BALDWIN, (1971), Ph.D. Professor, Education
Wesleyan University, B.A., M.A.T.; University of Pittsburgh, Ph.D.
- ROBERT BALOUGH, (1981), Ph.D., Assistant Professor, Economics
Northern Illinois University, B.A., M.A., Ph.D.
- FRANCIS C. BAPTIST, (1961), Ed.D., Professor, Art
Wisconsin State College, B.S.; State University of Iowa, M.F.A.;
Pennsylvania State University, Ed.D.
- GEORGE S. BARBER, (1967), Ph.D., Professor, English
The Pennsylvania State University, B.A., M.A., Ph.D.
- ARTHUR H. BARLOW, (1980), M.A.J.C., Assistant Professor, Communication
University of Puget Sound, B.A.; University of Washington, M.A.,
University of Florida, M.A.J.C.
- GREGORY D. BARNES, (1976), M.B.A., CPA, Assistant Professor, Accountancy
University of Maryland, B.S., M.B.A.
- NORBERT BASCHNAGEL, (1974), M.Ed., Associate Professor, Health
and Physical Education
State University of New York at Buffalo, B.Ed.; Additional graduate work,
SUNY, Buffalo.

- FRANK T. BATTISTA, (1970), Ed.D., Associate Professor, Education
University of Chicago, Roosevelt University, B.M.; The
Pennsylvania State University, M.Ed., Ed.D.; Additional work, West
Virginia University.
- PAUL E. BECK, (1966), Ph.D., Professor, Chair, Department of Chemistry
Franklin and Marshall College, B.S.; Duquesne University, Ph.D.
- GEORGE E. BELL, (1981), Master Sergeant, U.S. Army, Military Science, Reserve Officer
Training Corps
- WILLIAM R. BELZER, (1982), Ph.D., Assistant Professor, Biology
Franklin and Marshall College, B.A.; University of Pennsylvania, Ph.D.
- VAHE H. BERBERIAN, (1965), Mus. Dipl., Associate Professor, Music
Lebanese Academy of Fine Arts, Mus. Dipl.; Mozarteum International
Summer Academy, Mus. Cert.; Doctoral candidate, Indiana University.
- ALPHA E. BERNARD, (1955), Ed.D., Professor, Psychology
Northern Michigan College of Education, B.S.; Graduate work at
University of Michigan; Indiana University, M.S. in Ed., Ed.D.
- JACK H. BERTSCH, (1969), Ph.D., Associate Professor, Philosophy
Denison University, A.B.; Columbia University, L.L.B., J.D.; Ohio State University, Ph.D.
- GREGORY P. BESAW, (1981), Staff Sergeant, U.S. Army, Military Science, Reserve Officer
Training Corps
- NICHOLAS J. BEZAK, (1968), Ph.D., Professor Mathematics
The College of Steubenville, B.A.; Carnegie-Mellon University, M.S.;
University of Pittsburgh, Ph.D.
- J. DOUGLAS BILLS, (1981), B.S., Assistant Director of Admissions
Clarion State College, B.S.B.A.
- GERALD C. BISH, (1976), J.D., Assistant Professor, Finance
University of Pittsburgh, B.A.; Suffolk University Law School, J.D.
- DONALD F. BLACK, (1973), M.Ed., Associate Professor, Music
Wayne State University, B.S., M.Ed., Doctoral candidate, University of Michigan.
Choirmaster Certificate, American Guild of Organists.
- JACK N. BLAINE, (1966), M.S.T., Associate Professor, Physics, Planetarium Director
Clarion State College, B.S.; Antioch College, M.S.T., Additional study at
The Pennsylvania State University, SUNY at Oswego, and the University of Pittsburgh.
- CHARLES H. BLOCHBERGER, (1966), Ed.D., Professor, Education, Director of
Counseling and Career Planning Center
University of Scranton, B.S.; University of Maryland, M.Ed.; University of Virginia, Ed.D.
- JOHN J. BODOH, (1974), Ph.D., Professor, College Services
St. Paul Seminary, B.A.; University of Wisconsin-Madison, M.A., Ph.D.
- CHRISTIAN BOHLEN, (1965), M.M., Associate Professor, Music
Amsterdam Conservatory of Music, Mus. Dipl.; Indiana University, M.M.;
Doctoral course work completed, Indiana University.

- HERBERT R. BOLLAND, (1972), Ph.D., Associate Professor, Counselor
Baylor University, B.A., M.A.; Texas Tech University, Ph.D.
- OLIVE C. BOWER, (1966), Ph.D., Professor, Chemistry
Florida Southern, B.S.; Pennsylvania State University, M.S., Ph.D.
- WILLIAM N. BRENT, (1976), Ph.D., Professor, Chemistry
Purdue University, B.S.; Pennsylvania State University, Ph.D.
- DALE A. BROWN, (1980), Professor, Chair, Computer Information Science Department
Hiram College, B.A.; Syracuse University, M.S., Ph.D.
- LISBETH J. BROWN, (1973), M.Ed., Instructor, Education
Mercyhurst College, B.A.; Edinboro State College, M.Ed.; Additional graduate study,
Clarion State College, Edinboro State College; Doctoral Student, Indiana University
of Pennsylvania.
- ROBERT G. BUBB, (1966), M.Ed., Associate Professor, Health & Physical Education
University of Pittsburgh, B.S.; Pennsylvania State University, M.Ed.
- TERRY P. CAESAR, (1968), Ph.D., Associate Professor, English
University of Redlands, B.A.; University of Washington, Ph.D.
- BRIGITTE L. CALLAY, (1981), Doctorate, Associate Professor, Modern Languages
and Cultures
University of Delaware, B.A., M.A.; University of Louvain, Belgium, Doctorate in
Medieval Studies; Cornell University, graduate study.
- MARTHA M. CAMPBELL, (1973), M.Ed., Assistant Professor, English
Dakota State College, B.S.; South Dakota State University, M.Ed.;
Additional graduate study Michigan State University, Clarion State College.
- WILLIAM D. CAMPBELL, (1974), Ph.D., Associate Professor, Accountancy
Gannon College, B.S.; University of Pittsburgh, M.B.A., Ph.D.
Commonwealth of Pennsylvania, CPA.
- ALFRED B. CHARLEY, (1963), M.F.A., Associate Professor, Art
Southern Illinois University, B.S., M.F.A.; Additional graduate work,
University of Minnesota, Carnegie-Mellon University, and the University of Pittsburgh.
- FRANK M. CLARK, (1967), M.F.A., Associate Professor, Speech Communication and Theater
Indiana University of Pennsylvania, B.S.; Ohio University, M.F.A.;
Additional graduate work, Pennsylvania State University; University of Pittsburgh;
Wroxton College, Wroxton, England; Royal Holloway College, Englefield Green, England.
- FREDERICK G. CLARK, (1973), M.B.A., Associate Professor, Administrative Science
Ursinus College, B.A.; University of Pennsylvania, M.B.A.; Rutgers University,
C.P.C.U.; Additional work, Drexel University, University of Pennsylvania.
- ALFRED B. CLARKE, (1970), M.Ed., Associate Professor, Associate Director of Admissions
Slippery Rock State College, B.S.; Pennsylvania State University, M.Ed.;
Additional work at Indiana University of Pennsylvania and Clarion State College.
- GREGORY CLARY, (1981), M.A., Instructor, Director of Special Services
Marshall University, B.A., M.A.

- DOFORD COCKER, (1983), SGM, U.S. Army, Military Science, Reserve Officer Training Corps
- JAMES H. COLE, (1967), Ed.D., Professor, Dean, College of Communication and Computer Information Science
Eastern Illinois University, B.S.; Indiana University, M.S., Ed.D.
- WILLIAM F. COMBS, (1965), Ph.D., Professor, Psychology
University of West Virginia, B.A., M.A.; University of Oklahoma, Ph.D.
- DALPH O. COOK, (1964), M.S., Assistant Professor, Biology
Clarion State College, B.S.; Syracuse University, M.S.; Additional graduate work at Central Michigan University and Pennsylvania State University.
- BOB H. COPELAND, (1959), Ph.D., Professor, Speech Communication and Theater; Chair, Speech Communication and Theater Department
University of Wichita, B.A.; University of Denver, M.A., Ph.D.; Additional work at University of Mexico City, Director's Studio of New York City, and Long Beach State.
- ALASTAIR T. CRAWFORD, (1963), M.A., Assistant Professor, History
Upsala College, B.S.; Montclair State College, M.A.; Additional graduate work at University of Colorado, Northern Illinois University, and Kent State University.
- ROBERT E. CRAWFORD, (1962), M.A., Associate Professor, Dean of Administration
Slippery Rock State College, B.S.; University of Pittsburgh, M.A.; Additional graduate work, University of Washington.
- DANIEL D. CRONIN, (1970), Ph.D., Professor, Mathematics
Duquesne University, A.B.; St. Louis University, Ph.D.
- GEORGE W. CURTIS, JR., (1968), Ph.D., Professor, Associate Vice President for Student Affairs
Michigan State University, B.A., M.A.; United States International University, Ph.D.
- PETER L. DALBY, (1976), Ph.D., Professor, Biology
Genesee County Community College, Associate In Science;
Michigan State University, B.S., M.S., Ph.D.
- SHARON DANIELS-OLEKSAK, (1981), M.Ed., Instructor, Health and Physical Education
Bowling Green State University, B.S., M.Ed.
- JACK D. DAVIS, (1975), M.Ed., Assistant Professor, Health and Physical Education
Clarion State College, B.S.; Indiana State University, M.Ed.
- THOMAS DAVIS, (1976), Ph.D., Associate Professor, Administrative Science
University of Wyoming, B.S., M.S.; University of Arkansas, Ph.D.
- ANNE L. DAY, (1972), Ph.D., Professor, History
Emmanuel College, B.A.; Salem State College, M.Ed.; St. Louis University, Ph.D.
- CRAIG D. DEAN, (1981), M.S., Assistant Professor, Computer Information Science
University of Pittsburgh, B.S., M.S.; Additional graduate study, University of Pittsburgh.
- DEBRA E. DECKER, (1973), M.Ed., Instructor, Library
Lock Haven State College, B.S.; West Chester State College, M.Ed.,
Clarion State College, M.S.L.S.

- ENID DENNIS, (1976), Ph.D., Associate Professor, Economics
Harpur College, B.A.; Pennsylvania State University, M.A.; SUNY at Binghamton, Ph.D.
- LARRY R. DENNIS, (1979), Ph.D., Professor, English
Harpur College, B.A.; University of Washington, M.A.;
Pennsylvania State University, Ph.D.
- RAFAEL DIAZ Y DIAZ, (1966), B.A., Assistant Professor, Spanish
University of Denver, B.A.; Additional graduate work, University of Denver,
University of Colorado, West Virginia University. Research work at the
University of Puerto Rico.
- DONALD H. DININNY, (1965), Ph.D., Professor, Speech Pathology and Speech Science
Clarion State College, B.S.; Pennsylvania State University, M.Ed.;
Ohio University, Ph.D., Certificate of Clinical Competence in Speech Pathology.
- BRIDGET M. DOLECKI, (1982), M.Ed., Resident Director
Clarion State College, B.S., M.Ed.
- JAMES A. DONACHY, (1960), M.S., Associate Professor, Biology
Clarion State College, B.S.; Ohio University, M.S.; Additional graduate study,
The Pennsylvania State University, North Carolina State University,
Oklahoma University, University of Illinois, Purdue University.
- NADINE D. DONACHY, (1962), M.S., Professor, Biology; Coordinator, Medical Technology
Ohio University, A.B., M.S.; Additional graduate study, Drew University,
Oregon State University, Ohio University.
- MELAYN DORFLER, (1982), A.M.L.S., Assistant Professor, Librarian
Denison University, B.S.; University of Michigan, A.M.L.S., Additional graduate study;
Certificate of Health Sciences Librarianship.
- EDWARD F. DUCHNOWSKI, (1981), M.A., Resident Director
Austin Peay State University, B.S., M.A.; Additional graduate study, University of
Tennessee; Doctoral candidate, Nova University.
- T. AUDEAN DUESPOHL, (1970), M.Ed., M.S.N., Director, Division of Nursing
Oil City School of Nursing; University of Pittsburgh, B.S.N.;
Edinboro State College, M.Ed.; State University of New York at Buffalo, M.S.N.
- EDWARD G. DUFFY, (1961), Ph.D., Professor, History
Pennsylvania State University, B.A., M.A., Ph.D.
- CHARLES H. DUGAN, (1961), M.F.A., Assistant Professor, Art
Ohio University, B.A.; Bowling Green State University, M.F.A.;
Additional graduate work at Kent State University and Ohio University.
- TERRI L. DUNKLE, (1971), M.A., Associate Professor, Special Education
Clarion State College, B.S.; University of New Mexico, M.A.;
Additional graduate work, University of New Mexico and Indiana
University of Pennsylvania.
- BRIAN DUNN, (1978), B.A., Instructor, History
Clarion State College, B.A.; Additional graduate work, Clarion State College,
Old Dominion University, University of Pennsylvania; Doctoral candidate,
Bryn Mawr College.

- DEMPSEY DUPREE, (1967), Ph.D., CPA, Professor, Accountancy
University of Michigan, B.B.A., M.B.A.; Michigan State University, Ph.D.;
States of Pennsylvania and South Carolina, CPA.
- JEANNE M. TOUVELL, (1973), M.Ed., Instructor, Nursery School Program
Connecticut College, B.A.; Loyola University of Chicago, M.Ed.
- CHARLES ECONOMOUS, (1964), M.S., in L.S., Associate Professor, Library Science
University of North Carolina, B.A., M.S., in L.S.; Additional graduate work,
University of Michigan and University of North Carolina. Doctoral studies,
University of Pittsburgh.
- ROBERT V. EDINGTON, (1983), Ph.D., Provost and Academic Vice President Designee
Vallejo Community College, A.A.; San Francisco State College, B.A.; University of
Washington, M.A., Ph.D.
- WILLIAM T. EDWARDS, (1969), Ed.D., Associate Professor, Art
Indiana University of Pennsylvania, B.S.; Florida State University, M.S.;
Pennsylvania State University, Ed.D.
- JEFFREY EICHER, (1983), J.D., Associate Professor, Finance
Clarion State College, B.S., University of Pittsburgh, J.D. State of Pennsylvania, CPA.
- JOHN G. EICHLIN, (1979), J.D., Assistant Professor, Finance
Hiram College, B.A., University of Akron School of Law, J.D.
- JANE ELMES, (1974), M.A., Instructor, Speech Communication and Theater
Bloomsburg State College, B.A.; Ohio University, M.A.
- KENNETH F. EMERICK, (1963), M.L.S., Assistant Professor, Librarian
Clarion State College, B.S.; Rutgers University, M.L.S.
- ROGER A. ENGLE, (1967), M.S., Assistant Professor, Mathematics
Slippery Rock State College, B.S.; University of Alaska, M.S.;
Additional graduate work at Arizona State University.
- WILLIAM G. ENGLISH, (1972), M.Ed., Assistant Professor, Health and Physical Education
Lock Haven State College, B.S.; Slippery Rock State College, M.Ed.
- JOHN J. ERNISSEE, (1983), Ph.D., Assistant Professor, Geography and Earth Science
SUNY Oneonta, B.A.; University of South Carolina, M.S., Ph.D.
- ALBERT R. EXTON, (1969), Ph.D., Professor, Physics
Carnegie-Mellon University, B.S.; University of Pittsburgh, Ph.D.
- DEAN A. FARNHAM (1969), D.Mus. Arts, Professor, Music
Boston University, B.A., M.M. D.Mus. Arts.
- CARMEN S. FELICETTI, (1970), Professor, Communication
California State College, B.S.; Indiana University, M.S., Ed.D.
- LINDA FELICETTI, (1972), M.B.A., Assistant Professor, Marketing
Western College, B.A.; Indiana University, Bloomington, M.B.A.
- WILLIAM F. FELLOWS, (1982), B.A., Captain, U.S. Army, Assistant Professor,
Military Science, Reserve Officer Training Corps
Park College, Missouri, B.A.

- ROBERT A. FLECK, JR. (1979), Ph.D., Dean of the College of Business Administration
Ripon College, A.B., University of Illinois, M.B.A., Ph.D.
- RUTH P. FLECK, (1982), M.S., Assistant Professor, Computer Information Science
Ripon College, A.B.; University of Illinois, M.S.; Additional graduate study, University of
South Carolina and the University of Pittsburgh
- PIERRE N. FORTIS, (1977), Ph.D., Associate Professor, Modern Languages and Cultures
University of California at Los Angeles, B.A., M.A., Ph.D., Post-doctoral studies,
(Doctorat D'Etat), University of Brest, France.
- JOHN FOX, (1983), Ph.D., Associate Professor, Economics
University of Connecticut, B.A.; Brown University, M.A., Ph.D.
- GEORGE FRASHER, (1975), M.A., Instructor, Communication, (Part Time)
University of Iowa, B.S., M.A.
- BENJAMIN M. FREED, (1975), Ph.D., Associate Professor, Chair, Mathematics Department
Marietta College, B.S.; Kent State University, M.A., Ph.D.
- HENRY L. FUEG, (1968), Ph.D., Associate Professor, Communication
West Virginia Institute of Technology, B.S.; West Virginia University, M.A.;
Indiana University, Ph.D.
- WILLIAM FULMER, (1976), M.B.A., Associate Professor, Administrative Science;
Chair Administrative Science Department
Westminster College, B.S.; Clarion State College, M.B.A.; Additional graduate work,
University of Pittsburgh.
- AHMAD F. M. GAMALUDDIN, (1970), Ph.D., Professor, Library Science
Cairo University, B.A.; Western Michigan University, M.S.L.S.;
University of Pittsburgh, Ph.D.
- CONSTANCE E. GAMALUDDIN, (1978), M.L.S., Assistant Professor, Librarian
Indiana University of Pennsylvania, B.S.; University of Pittsburgh, M.L.S.
Additional graduate study, University of Pittsburgh.
- JOSE G. GARCIA, (1964), Ph.D., Associate Professor, Spanish
University of Valencia, B.A., M.A.; Doctoral work, University of Colorado,
Interamerican University, Mexico, Ph.D.
- STEPHEN I. GENDLER, (1969), Ph.D., Professor, Mathematics
University of Pennsylvania, B.A.; Pennsylvania State University, M.A., Ph.D.
Additional study, Colgate University, Temple University.
- ROBERT E. GILLIS, (1981), M.S., Affirmative Action Officer
Southwest Missouri State University, B.S.Ed., M.S.
- ROBERT B. GIRVAN, (1973), Ph.D., Associate Professor, Sociology
Gettysburg College, B.A.; University of Denver, M.A.; University of Colorado, Ph.D.
- PATRICIA A. GRACY, (1978), M.S.N., Assistant Professor, Nursing
Spencer Hospital of Nursing, R.N.; Villa Maria College, B.S.N.;
State University of New York at Buffalo, M.S.N.; Additional graduate study,
Clarion State College, Slippery Rock State College, Gannon University.
- BRYCE C. GRAY, (1966), M.A., Assistant Professor, Education, Assistant to the Associate
Vice President for Academic Affairs
Juniata College, B.A.; Bucknell University, M.A.; Additional graduate work,
Indiana University of Pennsylvania, Clarion State College.

- EMMETT D. GRAYBILL, JR., (1967), M.A., Associate Professor, Political Science
Kenyon College, B.A.; Ohio State University, M.A.
- FRANCIS G. GRECO, (1967), Ph.D., Professor, Chair English Department
Duquesne University, B.S., M.A., M. in Mus. Ed., Ph.D.; Additional work,
University of Pittsburgh and Carnegie-Mellon University.
- EDWARD S. GREJDA, (1961), Ph.D., Professor, English
Clarion State College, B.S.; University of Pittsburgh, M.Litt, Ph.D.;
Additional study at the Catholic University of America.
- WILLIAM E. GROSCH, (1962), M.Ed., Associate Professor, Art
Edinboro State College, B.A.; Pennsylvania State University, M.Ed.;
Additional graduate study, Haystack Mountain School of Crafts,
Pennsylvania State University, Alfred University, University of Denver, and
Dunconor Advanced Jewelry Workshop.
- KENNETH E. GRUGEL, (1981), M.A., Director, Financial Aid
University of Toledo, B.Ed.; Ohio State University, M.A.
- JOSEPH P. GRUNENWALD, (1978), D.B.A., P.E., Professor, Marketing
Youngstown State University, B.E.; Kent State University, M.B.A., D.B.A.,
Registered Professional Engineer.
- LOUIS E. GURECKA, (1978), M.S., Assistant Professor, Chair, Special Education Department
Clarion State College, B.S., M.S.; Additional graduate study, Duquesne University,
Indiana University, The Pennsylvania State University, University of Pittsburgh.
- ANITA J. HALL, (1977), M.A.T., Instructor, Finance
Indiana University of Pennsylvania, B.S., University of South Carolina, M.A.T.;
Additional graduate study, Clarion State College.
- JACK S. HALL, (1970), Ed.D., Associate Professor, Music
University of Kentucky, B.A.; Eastern Kentucky University, M.A.;
Indiana University of Pennsylvania, Ed.D.
- MARY R. HARDWICK, (1967), Ph.D., Professor, Speech Communication and Theater
Oklahoma State University, B.A.; Ohio University, M.F.A.; Michigan State
University, Ph.D.
- GEORGE A. HARMON, (1966), Ph.D., Professor, Biology
University of California, Los Angeles, A.B.; Stanford University, M.A., Ph.D.
Postdoctoral Fellow: Biokemiska Institutionen, Lunds Universitet, Sverige;
Roswell Park Memorial Institute; Haverford College.
- LEE-OLIVE HARRISON, (1975), M.Ed., Assistant Professor, Nursing
Wittenberg University, B.S.N.; Flower-Fifth Avenue Hospital School of Nursing, R.N.;
Slippery Rock State College, M.Ed. Post-master's studies, SUNY at Buffalo,
University of Michigan.
- ALFRED R. HARTLEY, (1979), M.A., Instructor, Speech Communication and Theater
University of Wisconsin, Whitewater, B.A.; Ball State University, M.A.
- HAROLD V. HARTLEY, JR., (1963), Ph.D., Professor Speech Pathology and Audiology
Bloomsburg State College, B.S.; Pennsylvania State University, M.Ed.;
Kent State University, Ph.D.; Additional graduate work at Pennsylvania State University,
Colorado State University, Western Reserve University, Certificate of Clinical
Competence in Speech Pathology and Audiology.

- RICHARD HAWK, (1980), M.B.A., Assistant Professor, Finance
Clarion State College, B.S., M.B.A.
- JOHN W. HEAD, (1973), Ph.D., Associate Professor, Library Science
University of Wisconsin, B.S., M.S. Ph.D.; Additional work at the University of Minnesota.
- IRMGARD C. HEGEWALD, (1970), Associate Professor, German
University of Muenster, University of Marburg, Staatsexamen; Bochum,
Recklinghausen, Assessorexamen; Doctoral candidate, University of Marburg.
- IRVIN C. HENRY, (1967), M.A., Associate Professor, Mathematics
Clarion State College, B.S.; Kent State University, M.A.; Additional graduate study,
State University of New York at Buffalo; The Pennsylvania State University.
- WILLIAM L. HENRY, (1974), J.D., Assistant Professor, Finance
Allegheny College, B.A.; West Virginia College of Law, J.D.
- RICHARD P. HERMAN, (1980), B.A., Assistant Director, Public Affairs;
Sports Information Director
Point Park College, B.A.; Edinboro State College, Clarion State College, graduate study.
- R. DENNIS HETRICK, (1972), M.S., Associate Professor, Chair, Speech Pathology and
Audiology Department
Clarion State College, B.S.; Purdue University, M.S. Doctoral candidate,
Kent State University.
- ROBERT D. HOBBS, (1971), Ed.D., Professor, Art
Howard County Junior College, A.A.; West Texas University, B.S.;
Colorado State College of Education; M.A.; Pennsylvania State University, Ed.D.
- JAMES HOLDEN, (1978), M.Ed., Assistant Professor, Computer Information Science
Edinboro State College, B.S.; The Pennsylvania State University, M.Ed.
- SUNION THEODORE HONG, (1978), Ph.D., CPA, Professor, Accountancy
Han Kook College, Seoul, B.A.; New York University, M.B.A., Ph.D.; States of
New York, Massachusetts, CPA.
- JANICE H. HORN, (1966), A.M.L.S., Assistant Professor, Librarian
Luther College, B.A.; University of Michigan, A.M.L.S.; Additional graduate work,
University of Illinois.
- ROGER HORN, (1966), A.M.L.S., Assistant Professor, Librarian
Louisiana State University, B.M.E.; University of Michigan, A.M.L.S.;
Additional graduate work, University of Illinois and Kent State University.
- ROBERT HUFFORD, (1963), Ph.D., Professor, Speech Communication and Theater
Illinois State Normal, B.S., M.S.; King's College, Durham University, England,
M.Litt.; Southern Illinois University, Ph.D.
- HENRY M. HUFNAGEL, (1981), M.S., Director, Computer Center
The Pennsylvania State University, B.S., M.S.
- JUDITH L. HUGHES, (1981), M.M., Instructor, Music
The University of Kansas, B.M. Mus.Ed, M.M. Voice; Additional graduate study,
Northwestern University.

- BRYAN HUWAR, (1977), M.Ed., Associate Professor, Special Education
Slippery Rock State College, B.S.; Temple University, M.Ed.; Additional graduate work,
Temple University, Doctoral candidate, Kent State University.
- ALBERT A. JACKS, JR., (1963), M.Ed., Associate Professor, Chair, Health and
Physical Education Department
Pennsylvania State University, B.S., M.Ed.; Additional graduate work at University of
Michigan, Pennsylvania State University, Slippery Rock State College.
- ARNOLD L. JESCHKE, (1966), M.Ed., Instructor, English
Edinboro State College, B.S., M.Ed.
- WANDA JETKIEWICZ, (1973), Ph.D., Assistant Professor, Biology
University of Pittsburgh, B.S., Ph.D.
- MARGARET ANN JETTER, (1973), Ph.D., Associate Professor, Library Science
Mercyhurst College, B.A.; University of Michigan, M.A.; Michigan State University, Ph.D.
- SHIRLEY JOHNSON, (1983), M.L.S., Instructor, Librarian
College of St. Rose, B.S.; SUNY, Albany, M.L.S.
- FRANCES W. JONES, (1971), M.S.N., Assistant Professor, Nursing Education
Hospital of the University of Pennsylvania School of Nursing, R.N.;
University of Pennsylvania, B.S.N., M.S.N.
- LEONARD A. JONES, (1982), M.S., Resident Director
Southern Illinois University, B.S., M.S.
- BOBBY E. JOSENERGER, (1981), Staff Sergeant, U.S. Army, Military Science,
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- CATHERINE R. JOSLYN, (1979), M.F.A., Assistant Professor, Art
Colby College, B.A.; Indiana University, M.F.A.; Additional work, Kansas City Art
Institute, University of Kansas, Penland School of Crafts, Arrowmont School of Crafts.
- BRIEN J. JOYCE, (1982), M.Ed., Assistant to the Dean of Student Life Services/
Resident Director
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— LEGEND —

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2. Nair Hall
3. Ballentine Hall
4. Given Hall
5. Campbell Hall
6. Ralston Hall
7. Forest Manor
8. Carrier Administration
9. Becht Hall
10. Carlson Library
11. Chapel Theatre
12. Davis Hall
13. Egbert Hall
14. Founders Hall
15. Marwick-Boyd Fine Arts Center
16. Peirce Science Center

ACADEMIC FACILITIES

17. Planetarium
18. Special Education Annex
19. Stevens Hall
20. Tippin Gymnasium and Natatorium
21. Becker Hall
22. Foundry
23. Still Hall — Business Administration
24. R.O.T.C.

SUPPORT SERVICES

25. Chandler Dining Hall
26. Harvey Student Center
27. Keeling Health Services Center
28. Riemer Student Center
29. Alumni House
30. Special Services
31. Writing Center
32. Faculty Center
33. Music Hall
34. ROTC Annex
35. Ceramics Shop
36. McEntire Maintenance
37. Receiving and Central Stores
38. Boiler Plant



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